DTIS FILE COPY

INSTALLATION RESTORATION PROGRAM

REMEDIAL INVESTIGATION REPORT SITE 1, FIRE TRAINING AREA

VOLK FIELD AIR NATIONAL GUARD BASE, CAMP DOUGLAS, WI

JULY 1990

DISTRIBUTION STATEMENT A

Approved for public reledant

AD-A231

nounce Unimited

VOLUME II



DTIC FEB 20 1991

HAZWRAP SUPPORT CONTRACTOR OFFICE

Oak Ridge, Tennessee 37831 Operated by MARTIN MARIETTA ENERGY SYSTEMS, INC. For the U.S. DEPARTMENT OF ENERGY under contract DE-AC05-840R21400

REPORT DOCUMENTATION PAGE

M8 No 9704-0188

Local continuous des reviews, as ection of information is stimated to surride 1 moir per response, including to promise registation statistical vestions destinated to the personal transport of the per 1. AGENCY USE ONLY (Leave plank) | 12. REPORT DATE 3. REPORT TYPE AND DATES COVERED July 1990 Final Remedial Investigation Report A ATLE AND SUBTILE Remedial Investigation Report 5. FUNDING NUMBERS Site 1, Fire Training Area Volk Field Air National Guard Base Capp Douglas, WI Volume I Volume II-Appendicies S. AUTHOR(S) N/A 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) 8. PERFORMING ORGANIZATION REPORT NUMBER Engineering-Science, INC. 57 Executive Park South, Suite 590 Atlanta, Georgia 30329 9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) 10. SPONSORING / MONITORING AGENCY REPORT NUMBER Hazardous Waste Remedial Actions Program Oak Ridge, TN Air National Guard Bureau Andrews Air Force Rase, Maryland 11. SUPPLEMENTARY NOTES 12a. DISTRIBUTION / AVAILABILITY STATEMENT 12b. DISTRIBUTION CODE Approved for public release; distribution is unlimited 13. AUSTRACT (Maximum 200 words) The report covers the Remedial Investigation conducted on Site 1, Fire Training Area at Volk Field Air National Guard Base. The remedial work is described and the testing conducted after remediation to insure all contamination has been removed. The study was conducted under the Air National Guard's Installtion Restoration Program. **AVAILABLE COPY** 15. NUMBER OF PAGES 14. SUBJECT TERMS Remedial Investigation Report Installation Restoration Program 16. PRICE CODE Wisconsin Air National Guard 177. LICURITY CLASSIFICATION 18. SECURITY CLASSIFICATION OF THIS PAGE 19. SECURITY CLASSIFICATION 1 20. LIMITATION OF ABSTRACT OF ABSTRACT Unclassified

15/11 75/49-01-780-5500

Standard Form 298 (Rev. 2-89) Prescribed by ANN 31d 239-18 298-102

INSTALLATION RESTORATION PROGRAM

REMEDIAL INVESTIGATION REPORT SITE 1, FIRE TRAINING AREA

VOLK FIELD AIR NATIONAL GUARD BASE Camp Douglas, Wisconsin FILE

VOLUME !!

Submitted By

HAZARDOUS WASTE REMEDIAL ACTIONS PROGRAM MARTIN MARIETTA ENERGY SYSTEMS Oak Ridge, Tennessee



Submitted To NATIONAL GUARD BUREAU ANGSC/DER Andrews AFB, Maryland

Accesion For NTIS CRASH DIIC 148 U. a. Louised Justili Jation Dut ibution/ Availability Codes Avail and for Dist Special

July 1990

Prepared By **ENGINEERING-SCIENCE, INC.** 57 Executive Park South, Suite 590 Atlanta, Georgia 30329

ABBREVIATED TABLE OF CONTENTS REMEDIAL INVESTIGATION REPORT SITE 1, FIRE TRAINING AREA VOLK FIELD ANGB CAMP DOUGLAS, WI

VOLUME I

EXECUTIVE SUMMARY

SECTION 1 INTRODUCTION **SECTION 2** PHYSICAL CHARACTERISTICS OF STUDY AREA **SECTION 3** FIELD INVESTIGATION PROGRAM **SECTION 4 INVESTIGATION RESULTS** SECTION 5 **REGULATORY SIGNIFICANCE OF FINDINGS SECTION 6** PUBLIC HEALTH EVALUATION SECTION 7 **RECOMMENDATIONS SECTION 8** REFERENCES SECTION 9 SITE MAP OF VOLK FIELD ANGB APPENDIX A **GLOSSARY OF TERMS** APPENDIX B SOIL BORING AND MONITORING WELL LOGS APPENDIX C **AOUIFER TESTING DATA** APPENDIX D **SOIL GAS SURVEY DATA**

VOLUME II

APPENDIX E ANALYTICAL DATA
APPENDIX F QA/QC REPORT

The Volume is of the report contains data diction and inches of soils and ground water.

Hydrocorpous and aromatic valitile organics

are allong the containments Listed.

APPENDIX E
ANALYTICAL DATA

APPENDIX E ANALYTICAL DATA

On the following pages are indices for analytical data for the Remedial Investigation conducted at Volk Field ANGB, Wisconsin. All references to "E" are located on the pages following the index (Appendix E of the Remedial Investigation).

This appendix is divided into three sections. Section 1 contains the Analytical Data on pages E-1 though E-495; Section 2 contains the Sample Preparation Data¹ (Holding Times) on pages E-496 through E-526; and Section 3 contains the Chain of Custody Records on pages E-527 through E-561.

886J181 E-i

Holding times for Base/Neutral Acid Extractables are found in the Analytical Data, Section 1. The laboratory number for Base/Neutral Acid Extractables is different than other laboratory numbers. The number is a 6 digit call number instead of 8 digits (e.g., laboratory number 88010190 is 880190 for Base/Neutral Acid Extractables).

ES Number	Lab	Purgeable Halocarbons	Aromatic Volatile Organics	Petroleum Hydrocarbons	PCBs	Base/Neutral Acid Extractables	23 Priority Pollutants Metals	Lead	Total Dissolved Solids
Site 1 (Fire Training Area)	Area)								
VF1,B-1,SS-1, 0.5'	88010190	E-1, E-6	E-50, E-55	E-99	E-124	E-156-160		E-463	
VF1, B-1, SS-2, 3.5'	161010181	E-1, E-7	20,	E-99	E-124	E-161-165		E-463	
VF1, B-1, SS-3, 8.5'	88010192	E-2, E-8	E-51, E-57	E-100	E-125	E-167-172		E-464	
VF1, B-2, SS-1, 0.5'	88010193	2-2	E-51	E-100	E-125	E-173-178		E-464	
VF1, B-2, SS-2, 3.5'	88010194	E-2	E-51	E-100	E-125	E-179-184		E-464	
VF1, B-2, SS-3, 8.5'	88010195	E-2	E-51	E-100	E-125	E-185-190		E-464	
	88010196	E-2	E-51	E-100	E-125	E-191-196		E-464	
ë	88010197	R-2	E-51	E-100	E-125	E-197-202		E-464	
	88010186			66-2	E-124	E-203-208		E-463	
_	88010189	E-1, E-5	E-50, E-54	66-M	E-124	E-209-214		E-463	
VEI, B-4, 55-2, 5.5	88010198	ת ה ה	2-32 2-5-9	101-10	6-126	E-215-20		2465	
	88010209	0.19		E-121	E-129	E-11-120 E-227-231		E-480	
	88010210	- E	E-61	E-122	E-130	E-232-236		E-481	
	88010211	B-11	E-61, E-64	E-122	E-130	E-237-241		E-481	
_	88010212			E-122	E-130	E-242-246		E-481	
	88010205			E-121	E-129	E-247-251		E-480	
	88010206	E-10, E-13	E-60, E-63	E-121	E-129	E-252-256		E-480	
	88010207	E-10	E-6 0	E-121	E-129	E-257-261		E-480	
	88010208	E-10	8-6 0	E-121	E-129	E-262-266		E-480	
	88010204	E-10	E-6 0	E-121	E-129	E-267-271		E-480	
9 ,	88010217		E-67	E-108	E-133	E-272-276		E-468	
	88010218	(- 3 (- 3	/ 0 - 0	20 C	E-133	E-2//-281		E-468	
VEI, B-0, 55-5, 0.5	98010219	C 4 5	7013	0010	E-133	E-262-286		10 T T T T T T T T T T T T T T T T T T T	
VF1, B-9, SS-2, 3,5	88010215	R-15	E-67	E-108	E-133	E-292-296		E-468	
	88010216	R-15	E-67	E-108	E-133	E-297-301		E-468	
	88020289	E-18	E-70	E-111	E-137	E-302-306		E-472	
	88020291	E-18	E-70	E-111	E-137	E-312-316		E-472	
	88020292	E-18	E-70	E-111	E-137	E-317-321		E-472	
	88020293	E-18	E-70	E-111	E-137	E-322-326		E-472	
	88020294	E-18		E-11	E-137	E-327-331		E-472	
	88020295	E-19, E-20	E-71, E-72	E-112	E-138	E-332-336		E-473	
	88020296	E-19	E-71	E-112	E-138	E-337-341		E-473	
	88020297	E-19	E-71	E-112	E-138	E-342-346		E-473	
	88020298	E-19	E-71	E-112	E-138	E-347-351		E-473	
	88020299	E-19	E-71	E-112	E-138	E-352-356		E-473	
	88020375	E-22	E-74	E-114	E-141	E-357-361		E-476	
	88020376	E-22	E-74	E-114	E-141	E-362-366		E-476	
	88020377	E-23	E-75	E-115	E-142	E-367-372		E-477	
_	88020378	E-23	E-75	E-115	E-142	E-373-377		E-477	
VF1, B-14, SS-3, 8,5	88020371	E-22	E-74	E-114	Y	100 T 0 C			

ES Number	Number	Purgeable Halocarbons	Volatile Organics	Petroleum Hydrocarbons	PCBs	Acid Extractables	Pollutants Metals	Lead On ly	Dissolved Solids
Site 1 (Fire Training Area) (Continued)	Area) (Conti	(penu)							
VP1, B-15, SS-1, 0.5'	88020372	E-22	E-74	E-114	E-141	E-383-387		E-476	
	88020373	E-22	E-74	E-114	E-141	E-388-392		E-476	
	88020374	B-22	E-74	E-114	E-141	E-393-397		E-476	
VF1, B-21, SS-1, 1.0'	88010187	1-3	E-50	E-99	E-124	E-398-403		E-463	
VP1, B-22, SS-1, 0.5'	88010188	B-1, E-4	E-50, E-53	E-99	E-124	E-404-409		E-463	
VP1, B-26, SS-1, 0'	88010214	E-15	E-67	E-1 08	E-133	E-410-414		E-468	
	88020290	8-18	E-70	E-111	E-137	E-407-414		E-472	
VP1, B-28, SS-1, 1.5'	88020300	E-19	E-71	E-112	E-138	E-415-419		E-473	
VP. ET-1, GW1, ES	88030567	E-39	E-83	E-119	B-147	E-421-425		E-490	E-119
VP. ET-2, GW1, ES	88030568	8-39	E-83	B-119	E-147	E-421-425		E-490	E-119
VP, ET-3, GH1, ES	88030569	E-39, E-41	E-83, E-85	E-119	E-147	E-426-429		E-490	E-119
VF, ET-4, GW1, ES	88030573	E-29, E-31	E-87, E-89	E-106	E-145	E-430-433		E-493	E-106
VP, ET-5, GH1, ES	88030572	E-29, E-30	E-87, E-88	E-106	E-145	E-430-433		E-493	E-106
VP, ET-6, GW1, ES	88030576			E-106	E-145	E-434-438		E-493	E-106
VP, ET-7, GM1, ES	88030575	E-29, E-32		E-106	E-145	E-439-442		E-493	E-106
VP, 1-41, GW1, ES	88030540			E-103	E-149	E-443-446		E-487	E-103
VP, 1-42, G41, ES	88030566		E-83, E-64	6-1-9	E-147	E-447-450		E-490	E-119
VF, 1-43, G41, ES	88030554	E-34, E-3/		/ 1 - 2	ולו-א	E-451-454		484-3	K-11/
VE, 144, 541, ES	88030337	E-20		507-31	E-149	E-400-408		184-3	E-103
VF, 1-45, GF1, ES	88030538	E-26	E-1/, E-80	E-103	E-149	E-459-462		E-48/	E-103
Trip Blanks									
VP, 11-43, G41, ES	88030542	E-27	E-78						
VF, 11-44, G41, ES	88030563	E-36	B-94						
VP, 11-W5, GW1, ES	88030570	E-39	B-83						
VP, 11-46, GH1, ES	88030577	E-29	E-87						
Bailer Rinsates									
VP. 12-H2, GH1, ES	88030562	E-35	E-93	E-123a			E-484a		E-123a
VF, 12-H3, GH1, ES	88030565	R-39	E-83	B-119	E-147	E-447-450		E-490	E-119
Field Blank									
VP, 13-W1, GW1, ES	88030574	E-29	E-87	E-106		E-439-442	E-493		E-106
Production Wells									
VP. 950. C4-1. ES	88071335	E-43. E-46	E-97						
Trip Blank	88071336		E-97						
VF, 934, GW-1, ES	88071337		E-97						
	00000		.0-0						

APPENDIX E--Continued INDEX OF SAMPLE PREPARATION DATA

Lab		Purceable	Aromatic	Potrolous		Base/Neutral		Total Dissolved	
Number	ES Number	Ha locarbons	Organics	Hydrocarbons	PCBs	Extractables*	Metals	Solids	& Moisture
88010186	VF1, B-3, SS-3 8.5		E-498	E-498	E-498		E-502		E-496
88010187			E-498	E-498	E-498		E-502		E-496
88010188	_		E-498	E-498	E-498		E-502		E-496
88010189		E-498	E-498	E-498	E-498		E-502		E-496
88010190	VF1, B-1, SS-1 0.5'	E-498	E-498	E-498	E-498		E-502		E-496
88010191	VF1, B-1, SS-2 3.5'	E-498	E-498	E-498	E-498		E-502		E-496
88010192	VF1, B-1, SS-3 8.5'	E-499	E-499	E-499	E-499		E-502		E-496
88010193	0	E-499	E-499	E-499	E-499		E-502		E-496
88010194	VF1, B-2, SS-2 3.5'	E-499	E-499	E-499	E-499		E-502		E-496
88010195	œ	E-499	E-499	E-499	E-499		E-502		E-496
88010196	VF1, B-3, SS-1 1.0'	E-499	E-499	E-499	E-499		E-502		E-496
88010197	VP1, B-3, SS-2 3.5'	E-499	E-499	E-499	E-499		E-502		E-496
88010198	VF1, B-4, SS-2 3.5'	E-499	E-499	E-499	E-499		E-502		E-496
88010199	VF1, B-4, SS-3 8.5'	E-499	E-499	E-499	E-499		E-502		E-496
88010204	VF1, B-7, SS-3 8.5'	E-503	E-503	E-503	E-503		E-505		E-496
88010205	VF1, B-6, SS-2 3.5'	E-503	E-503	E-503	E-503		E-505		E-496
88010206	VF1, B-6, SS-3 8.5'	E-503	E-503	E-503	E-503		E-505		E-496
88010207	VF1, B-7, SS-1 0'	E-503	E-503	E-503	E-503		E-505		E-496
88010208	VF1, B-7, SS-2 3.5'	E-503	E-503	E-503	E-503		E-505		E-496
88010209	VF1, B-5, SS-1 0'	E-503	E-503	E-503	E-503		E-505		E-496
88010210	VF1, B-5, SS-2 3,5'	E-504	E-504	E-504	E-504		E-505		E-496
88010211	VF1, B-5, SS-3 10.0'	. E-504	E-504	E-504	E-504		E-505		E-496
88010212	VF1, B-6, SS-1 0'	E-504	E-504	E-504	E-504		E-505		E-496
88010214	VF1, B-26, SS-1 0'	E-506	E-506	E-506	E-506		E-508		E-497
88010215	VF1, B-9, SS-2 3.5'	E-506	E-506	E-506	E-506		E-508		E-497
88010216	VF1, B-9, SS-3 8.5'	E-506	E-506	E-506	E-506		E-508		E-497
88010217	VF1, B-8, SS-1 0'	E- 506	E- 506	E-506	E-506		E-508		E-497
88010218	VF1, B-8, SS-2 3.5'	E-506	E-506	E-506	E-506		E-508		E-496
88010219	_	E-506	E-506	E-506	E-506		E-508		E-496
88010220	0		E-: 07	E-507	E-507		E-508		E-496
88020289	_		E-509	E-509	E-509		E-511		E-496
88020290			E-509	E509	E-509		E-511		E-496
88020291			E-509	E-509	E-509		E-511		E-496
88020292			E-509	E-509	E-509		E-511		E-496
88020293			E-509	E-509	E- 509		E-511		E-496
88020294	VF1,B-11,SS-2 3.5		E-509	E-509	E-509		E-511		E-496
88020295			E-510	E-510	E-510		E-511		E-496
88020296	VF1, B-12, SS-1 1.0*		E-510	E-510	E-510		E-511		E-496
88020297	VF1, B-12, SS-2 3.5'		E-510	E-510	E-510		E-511		E-496
88020298	VF1, B-12, SS-3 8.5	· E-510	E-510	E-510	E-510		E-511		E-496
88020299	VF1, B-13, SS-1 1.5	_	E-510	E-510	E-510		E-511		E-496
88020300	VF1, B-28, SS-1 1.5	_	E-510	E-510	E-510		E-511		E-496
88020371	VF1, B-14, SS-3 8.5	' E-512	E-512	E-512	E-512		E-514		E-496
88020372	VF1, B-15, SS-1 0.5	· E-512	E-512	E-512	E-512		E-514		E-496
88020373		_	E-512	E-512	E-512		E-514		E-496

APPENDIX E--Continued INDEX OF SAMPLE PREPARATION DATA

Lab Number ES Nu 88020374 VP1,B- 88020375 VP1,B- 88020376 VP1,B- 88020377 VP1,B- 88020377 VP1,B-	ES Number VP1, B-15, SS-3 8.5' VP1, B-13, SS-2 3.5' VP1, B-14, SS-1 1.0' VP1, B-14, SS-1 3.5' VP1, B-14, SS-2 3.5' VP1, B-14, SS-2 3.5' VP1, H-44, GH1, ES	Purgeable Halocarbons E-512 E-512 E-513 E-513 E-513 E-514	Volatile Organics E-512	Petroleum Hydrocarbons	PCBs	Acid Extractables	Metals	Dissolved Solids	* Moisture
	15, 85 - 3 8.5 ° -13, 85 - 2 3.5 ° -14, 85 - 1 1.0 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -14, 93 - 2 3.5 ° -15, 93 - 2 3.5 ° -16, 93 - 2 3.5 ° -17, 93 - 2 3.5 ° -18, 93 - 2 3	R-512 R-512 R-512 R-513 R-513	E-512						
	-13, SS-2 3.5* -13, SS-3 8.5* -14, SS-1 1.0* -14, SS-2 3.5* 44, GW1, ES	R-512 R-512 R-513 R-516		E-512	E-512		E-514		E-496
	-13, SS-3 8.5' -14, SS-1 1.0' -14, SS-2 3.5' A4, GN1, ES	E-512 E-513 E-513 E-516	E-512	E-512	E-512		E-514		E-496
	-14,SS-1 1.0* -14,SS-2 3.5* 44,GN1,ES M5,GN1,ES	8-513 8-513 6-516 6-516	E-512	E-512	E-512		E-514		E-496
	-14,8S-2 3.5' 14,GH1,ES 15,GH1,ES	E-513 E-516 E-516	E-513	E-513	E-513		E-514		E-496
Ī	14, GH1, ES 15, GH1, ES	E-516 E-516	E-513	E-513	E-513		E-514		E-496
	15, GH1, ES	E-516	E-516	E-516	E-516		E-518	E-516	
88030538 VP,14			E-516	E-516	E-516		E-518	E-516	
88030540 VF,1→	VF, 1-W1, GW1, ES	E-516	E-516	E-516	E-516		E-518	E-516	
88030542 VF, 11-	VP, 11-43, GW1, ES	E-517	E-517						
88030554 VF, 1-	VP, 1-W3, GW1, ES	E-519	E-519	E-519	E-519		E-522	E-519	
88030555 VF, 10-	VF, 10-41, GW1, ES	E-519	E-519	E-519	E-519		E-522	E-519	
88030562 VP, 12-	VP, 12-W2, GW1, ES	E-521	E-521	E-521	E-521		E-522	E-521	
88030563 VP, 11-	VP, 11-44, GW1, ES	E-521	E-521						
88030565 VP, 12-	VP, 12-W3, GW1, ES	E-523	E-523	E-523	E-523		E-524	E-523	
	VF, 1-W2, GW1, ES	E-523	E-523	E-523	E-523		E-524	E-523	
88030567 VF, ET-	VF, ET-1, GW1, ES	E-523	E-523	E-523	E-523		E-524	E-523	
88030568 VF, ET-	VP, ET-2, GW1, ES	E-523	E-523	E-523	E-523		E-524	E-523	
88030569 VF, ET.	VF, ET-3, GW1, ES	E-523	E-523	E-523	E-523		E-524	E-523	
88030570 VP, 11.	VP, 11-45, GW1, ES	E-523	E-523						
88030572 VP, ET-	VP, ET-5, GW1, ES	£-525	E-525	E-525	E-523		E-515	E-525	
88030573 VP, ET-	VP, ET-4, GW1, ES	E-525	E-525	E-525	E-523		E-515	E-525	
88030574 VF, 13-	VF, 13-H1, GW1, ES	E-525	E-525	E-525	E-523		E-515	E-525	
88030575 VP, ET-	VP, ET-7, GM1, ES	E-525	E-525	E-525	E-523		E-515	E-525	
88030576 VF, ET-	VF, ET-6, GW1, ES	E-525	E-525	E-525	E-525		E-541	E-551	
88030577 VF, 11.	VP, 11 +46, GW1, ES	E-525	E-525						
88071335 VP, 95(VP, 950, GW-1, ES	E-526	E-526						
88071336 Trip Blank	Blank	E-526	E-526						
88071337 VF, 93	VF, 934, GW-1, ES	E-526	E-526						
88071338 VF, 91	VF, 916, GM-1, ES	E-526	E-526						

^{*} Holding times for Base/Neutral Acid Extractables are on the Analytical Data Sheet.

ANALYTICAL RESULTS FOR PURGEABLE HALOCARBONS

ENGINEERING SCIENCE INC. 04/20/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/K6, GROUP 8010

	VF1,B-3,SS-3, 8.5'	VF1,B-21,SS-1, 1.0'	VF1,B-22,SS-1, 0.5'	VF1,B-4,SS-1, 0.5'	VF1,B-1,SS-1, 0.5'	VF1,B-1,S\$-2, 3.5'
TEST COMPOUND	88010186	88010187	88010188	88010189	88010190	88010191
BENZYL CHLORIDE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY) METHAME	ND	ND	MD	ND	ND	ND
BIS (2-CHLOROISOPROPYL) ETHER	ND	ND	MD	MD	ND	ND
BROMOBENZENE	ND	ND	MD	ND	ND	MD
BRONODICHLOROMETHAME	MD	MD	ND	ND	ND	ND
BRONOFORM	ND	NB	ND	ND	ND	ND
BRONOETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLORACETALDEHYDE	ND	ND	ND	ND	ND	MD
CHLORAL	ND	MD	ND	ND	ND	MD
CHLOROBENZENE	ND	MD	ND	ND	ND	ND
CHLOROETHAME	ND	ND	ND	ND	ND	NB
CHLOROFORM	ND	ND	ND	ND	ND	MD
1-CHLOROHEXANE	ND	ND	ND	ND	NĐ	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHAME	ND	ND	ND	ND	ND	ND
CHLORONETHYL METHYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROTOLUENE	MD	ND	N9	ND	NO	ND
DIBRONOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMONETHANE	MD	ND	NB	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1.3-DICHLOROBENZENE	ND	ND	ND	ND	ND	KD
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUGROMETHANE	ND	MD	165	ND	ND	KD
1,1-DICHLOROETHANE	ND	100	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	MD	ND	NB	ND	ND
1,1-DICHLOROETHYLENE	ND	HD	ND	ND	ND	ND
TRANS-1,2-DICHLORGETHYLENE	MD	NB	ND	ND	ND	10
DICHLOROMETHANE	ND	ND -	16	ND	ND	NB
1.2-BICHLOROPROPANE	ND	ND	NB	NB	ND	ND
1,3-DICHLOROPROPYLEME	ND	NO	19	ND	ND	ND
1,1,2,2-TETRACHLORGETHANE	IØ	10	165	ND	ND	ND
1,1,1,2-TETRACHLOROETHAME	113	10	ND	KB	KD	10
TETRACHLOROETHYLENE	160	ND	0,73	0.53	0.94	0.70
1,1,1-TRICHLOROETHANE	ND	H9	ND	ND	ND	ND
1,1,2-TRICHLOROETHAME	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	ND	41	8.0	33	17
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	NB	ND	ND	ND	ND
			·-	· · · =		
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/K6, GROUP 8010

TECT COMPOSING	VF1,8-1,SS-3, 8.5'	VF1,8-2,SS-1, 0.5'	VF1,8-2,SS-2, 3.5'	VF1,8-2,SS-3, 8.5'	VF1,8-3,SS-1,	VF1,8-3,SS-2, 3.5'
TEST COMPOUND	98010192	88010193	88010194	88010195	88010196	88010197
BENZYL CHLORIDE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY) METHANE	ND	ND	ND	ND	ND	ND
BIS (2-GHLCROISGPROPYL)ETHER	ND	ND	ND	ND	ND	ND
BROMOBENZENE	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND CF
BROMOFORM	OP	ND	ND	ND	ND	ND GP
BROMOETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLORACETALDEHYDE	ND	ND	ND	ND	ND	ND
CHLORAL	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
1-CHLOROHEXANE	ND	ND	ND	ND	ND	ND
2-CHLGROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	MD	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROTOLUENE	ND	ND	ND	ND	ND	ND
DIBRONOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1.3-DICHLOROBENZENE	ND CM	ND	ND	ND	ND	ND
1, 4-DICHLOROBENZENE	D	ND	ND	ND	סא	ND
DICHLORODIFLUCROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1.2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	D	ND	ND	ND	ND
DICHLOROMETHANE	ND OK	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
•	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLORGETHANE	ND	ND	ND D	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.58	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND 0.36	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE		ND UND	ND	ND	ND	ND
TRICHLOROETHYLENE	14 MD	· · -	ND	ND	ND OF	ND
TRICHLOROFLUOROMETHANE	ND	ND un			ND D	ND
TRICHLOROPROPANE	ND	ND	ND ND	ND ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	RU	ITU

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 8010

	VF1,8-4,88-2, 3.5'	3. 3
TEST COMPOUND	88010178	88010199
BENZYL CHLORIDE	ND	ND
6(5 (C-CHLORGETHOXY)METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ND
PROMODICHLOROMETHANE	ND	ND
3ROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLCROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL STHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DISROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
t,2-DICHLOROBENZENE	11D	ND
1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE	ND	ND
	ND	ND
	ND	ND
1,1-DICHLOROETHANE 1,2-DICHLOROETHANE	ND ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE 1,1,2,5-TETRACHLOROETHANE	ND	ND
1,1,2,5-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOR OETHYLENE	ND	ND
1,1,1~TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TR [CHLOROETHYLENE	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLORGEROFANE	ND	ND
VINYL CHLORIDE	ND	ND

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010188

VF1,B-22,SS-1,0.5

TEST COMPOUND		Analysis	Results
BIS (2-CHLOROETHOXY)METHANE	TEST COMPOUND	Col 1	Col 2
BIS (2-CHLOROETHOXY)METHANE			
BIS (2-CHLOROISOPROPYL)ETHER	BENZYL CHLORIDE	ND	ND
BROMOBENZENE	BIS (2-CHLOROETHOXY) METHANE	ND	ND
RENOMOTICHLOROMETHANE	BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOFORM	BROMOBENZENE	ND	ND
BROMCETHANE	BROMODICHLOROMETHANE	ND	ND
CARBON TETRACHLORIDE ND ND CHLORACETALDEHYDE ND ND CHLORAL ND ND CHLOROBENZENE ND ND CHLOROFORM ND ND 1-CHLOROEEXANE ND ND 2-CHLOROETHYL VINYL ETHER ND ND CHLOROMETHANE ND ND CHLOROMETHYL METHYL ETHER ND ND CHLOROTOLUENE ND ND CHLOROMETHANE ND ND DIBROMOCHEOROMETHANE ND ND 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND 1,4-DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,2-DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,2-DICHLOROBENZENE ND ND 1,1-DICHLOROETHANE ND	BROMOFORM	ND	ND
CHLORACETALDEHYDE ND ND CHLORAL ND ND CHLOROBENZENE ND ND CHLOROFORM ND ND 1-CHLOROHEXANE ND ND 2-CHLOROSTHYL VINYL ETHER ND ND CHLOROMETHYL WETHYL ETHER ND ND CHLOROMETHYL WETHYL ETHER ND ND CHLOROTOLUENE ND ND DIBROMOCHLOROMETHANE ND ND DIBROMOGHANE ND ND 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND 1,4-DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,2-DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,2-DICHLOROBENZENE ND ND 1,2-DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND	BROMOETHANE	ND	ND
CHIORAL ND ND CHLOROBENZENE ND ND CHLOROFTHANE ND ND CHLOROFORM ND ND 1-CHLOROHEXANE ND ND 2-CHLOROETHYL VINYL ETHER ND ND CHLOROMETHANE ND ND CHLOROMETHANE ND ND CHLOROMETHANE ND ND DIBROMOCHLOROMETHANE ND ND DIBROMOETHANE ND ND 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND TRAS-1,2-DICHLOROETHANE ND ND	CARBON TETRACHLORIDE	ND	ND
CHLOROBENZENE ND ND CHLOROETHANE ND ND CHLOROFORM ND ND 1-CHLOROEXANE ND ND 2-CHLOROETHYL VINYL ETHER ND ND CHLOROMETHANE ND ND CHLOROMETHYL METHYL ETHER ND ND CHLOROTOLUENE ND ND DIBROMOGHLOROMETHANE ND ND DIBROMOMETHANE ND ND 1, 2-DICHLOROBENZENE ND ND 1, 3-DICHLOROBENZENE ND ND 1, 4-DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND 1, 1-DICHLOROBENZENE ND ND 1, 1-DICHLOROBENZENE ND ND 1, 1-DICHLOROBENZENE ND ND 1, 1-DICHLOROETHANE ND ND 1, 1-DICHLOROETHANE ND ND 1, 1-DICHLOROETHANE ND ND 1, 1, 2-TETRACHLOROETHANE ND ND 1, 1, 1, 2-TETRACHLOROETHANE <td>CHLORACETALDEHYDE</td> <td>ND</td> <td>ND</td>	CHLORACETALDEHYDE	ND	ND
CHLOROETHANE CHLOROFORM 1-CHLOROHEXANE 1-CHLOROETHYL VINYL ETHER ND CHLOROETHYL VINYL ETHER ND CHLOROMETHYL METHYL ETHER ND CHLOROMETHYL METHYL ETHER ND CHLOROMETHYL METHYL ETHER ND DIBROMOCHLOROMETHANE ND ND ND ND ND ND ND ND ND	CHLORAL	ND	ND
CHLOROFORM ND ND 1-CHLOROHEXANE ND ND 2-CHLOROETHYL VINYL ETHER ND ND CHLOROMETHANE ND ND CHLOROTOLUENE ND ND DIBROMOCHLOROMETHANE ND ND DIBROMOMETHANE ND ND 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND 1,4-DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,1-DICHLOROBETHANE ND ND 1,1-DICHLOROETHANE ND ND 1,1-DICHLOROETHYLENE ND ND 1,2-DICHLOROPROPANE ND ND 1,1,2-TETRACHLOROETHANE ND ND 1,1,1-TETICHLOROETHANE ND ND 1,1,1-TETICHLOROETHANE	CHLOROBENZENE	ND	ND
1-CHLOROHEXANE	CHLOROETHANE	ND	ND
2-CHLOROETHYL VINYL ETHER ND ND CHLOROMETHANE ND ND CHLOROMETHYL METHYL ETHER ND ND CHLOROTOLUENE ND ND DIBROMOCHTHANE ND ND DIBROMOMETHANE ND ND 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND 1,4-DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND 1,1-DICHLOROETHANE ND ND 1,2-DICHLOROETHANE ND ND 1,1-DICHLOROETHYLENE ND ND 1,2-DICHLOROPROPANE ND ND 1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPANE ND ND 1,1,2-TETRACHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND 1,1,2-TRIC	CHLOROFORM	ND	ND
CHLOROMETHANE CHLOROMETHYL METHYL ETHER ND CHLOROTOLUENE ND DIBROMOCHLOROMETHANE ND ND ND ND ND ND ND ND ND	1-CHLOROHEXANE	ND	ND
CHLOROMETHYL METHYL ETHER ND ND CHLOROTOLUENE ND ND DIBROMOCHLOROMETHANE ND ND DIBROMOMETHANE ND ND 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND 1,4-DICHLOROBENZENE ND ND DICHLOROBIFLUOROMETHANE ND ND 1,1-DICHLOROETHANE ND ND 1,2-DICHLOROETHYLENE ND ND DICHLOROMETHANE ND ND 1,2-DICHLOROETHANE ND ND 1,3-DICHLOROPROPANE ND ND 1,1,2-TETRACHLOROETHANE ND ND 1,1,2-TETRACHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND TRICHLOROETHULENE ND ND TRICHLOROETHANE ND ND TRICHLOROETHANE ND ND TRICHLOROETHANE ND ND TRICHLOROETHAN	2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROTOLUENE ND ND ND DIBROMOCHLOROMETHANE ND ND ND 1,2-DICHLOROBENZENE ND ND ND 1,3-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND ND ND DICHLORODIFLUOROMETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPANE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHYLENE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	CHLOROMETHANE	ND	ND
DIBROMOCHLOROMETHANE DIBROMOMETHANE ND ND ND 1,2-DICHLOROBENZENE ND ND ND 1,3-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND DICHLORODIFLUOROMETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND ND 1,2-DICHLOROETHANE ND ND ND ND TRANS-1,2-DICHLOROETHYLENE ND DICHLOROMETHANE ND ND ND ND 1,2-DICHLOROPROPANE ND ND ND ND 1,3-DICHLOROPROPANE ND ND ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND	CHLOROMETHYL METHYL ETHER	ND	ND
DIBROMOMETHANE ND ND 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND 1,4-DICHLOROBENZENE ND ND DICHLORODIFLUOROMETHANE ND ND 1,1-DICHLOROETHANE ND ND 1,2-DICHLOROETHYLENE ND ND DICHLOROMETHANE ND ND 1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROFLUOROMETHANE ND ND TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	CHLOROTOLUENE	ND	ND
1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND ND ND DICHLORODIFLUOROMETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHANE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHANE ND ND ND TI,1,1-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	DIBROMOCHLOROMETHANE	ND	ND
1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE ND ND ND ND ND ND ND ND ND	DIBROMOMETHANE	ND	ND
1,4-DICHLOROBENZENE ND ND DICHLORODIFLUOROMETHANE ND ND 1,1-DICHLOROETHANE ND ND 1,2-DICHLOROETHANE ND ND 1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE A1 A8 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	1,2-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE ND ND 1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TRICHLOROETHYLENE A1 TRICHLOROETHYLENE A1 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE	1,3-DICHLOROBENZENE	ND	ND
1,1-DICHLOROETHANE 1,2-DICHLOROETHANE ND ND 1,1-DICHLOROETHYLENE ND ND TRANS-1,2-DICHLOROETHYLENE ND DICHLOROMETHANE ND ND 1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND TETRACHLOROETHYLENE ND ND 1,1,1-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND TRICHLOROETHYLENE A1 TRICHLOROETHYLENE A1 TRICHLOROETHYLENE A1 TRICHLOROFLUOROMETHANE ND ND TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE	1,4-DICHLOROBENZENE	ND	ND
1,2-DICHLOROETHANE 1,1-DICHLOROETHYLENE ND ND TRANS-1,2-DICHLOROETHYLENE ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE A1 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE	DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	1,1-DICHLOROETHANE	ND	ND
TRANS-1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE 0.73 1.4 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 41 48 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE	1,2-DICHLOROETHANE	ND	ND
DICHLOROMETHANE ND ND 1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE 0.73 1.4 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 41 48 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	1,1-DICHLOROETHYLENE	ND	ND
1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE 0.73 1.4 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 41 48 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	TRANS-1, 2-DICHLOROETHYLENE	ND	ND
1,3-DICHLOROPROPYLENE ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE 0.73 1.4 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 41 48 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	DICHLOROMETHANE	ND	ND
1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE 0.73 1.4 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 41 48 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND ND	1,2-DICHLOROPROPANE	ND	ND
1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE 0.73 1.4 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 41 48 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	1,3-DICHLOROPROPYLENE	ND	ND
TETRACHLOROETHYLENE 0.73 1.4 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 41 48 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 41 48 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,1,2-TETRACHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANENDNDTRICHLOROETHYLENE4148TRICHLOROFLUOROMETHANENDNDTRICHLOROPROPANENDND	TETRACHLOROETHYLENE	0.73	1.4
TRICHLOROETHYLENE 41 48 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,1-TRICHLOROETHANE	ND	ND
TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROPROPANE ND ND	TRICHLOROETHYLENE	41	48
	TRICHLOROFLUOROMETHANE	ND	ND
VINYL CHLORIDE ND ND	TRICHLOROPROPANE	ND	ND
	VINYL CHLORIDE	ND	ND

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010189

VF1,B-4,SS-1,0.5'

DENCYL CHLORIDE		Analysis	Remilts
BENZYL CHLORIDE BIS (2-CHLOROETHOXY)METHANE BIS (2-CHLOROISOPROPYL)ETHER ND ND ND BROMOBENZENE ND ND ND ROMOBENZENE ND ND ND ROMOETHANE ND ND ND ND ND ROMOETHANE ND ND ND ND ND ND ND ND ND	TEST COMPOIND	•	
BIS (2-CHLOROETHOXY) METHANE BIS (2-CHLOROISOPROPYL) ETHER BIS (2-CHLOROISOPROPYL) ETHER BIS (2-CHLOROISOPROPYL) ETHER BROMODENZENE BROMODICHLOROMETHANE BROMOFORM BROMOFORM BROMOETHANE CHLORAL CHLORAL CHLORAL CHLOROETHANE CHLOROFORM 1-CHLOROFORM 1-CHLOROFORM 1-CHLOROFORM 1-CHLOROETHANE CHLOROETHYL VINYL ETHER CHLOROMETHANE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE DICHLOROBENZENE ND ND ND ND ND ND ND ND ND	1251 CONFOUND		
BIS (2-CHOROISOPROPYL)ETHER	BENZYL CHLORIDE	ND	ND
BROMOBENZEME	BIS (2-CHLOROETHOXY) METHANE	ND	ND
BROMODICHLOROMETHANE	BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
### BROMOFORM	BROMOBENZENE	ND	ND
BROMDETHANE BROMDETHANE BROMDETHANE CARBON TETRACHLORIDE CHLORAL CHLORAL CHLORAL CHLOROBENZENE ND ND ND CHLOROBENZENE ND ND ND CHLOROFORM ND ND ND CHLOROFORM ND	BROMODICHLOROMETHANE	ND	ND
CARBON TETRACHLORIDE ND ND CHLORAL ND ND CHLORAL ND ND CHLOROBENZENE ND ND CHLOROFORM ND ND CHLOROFEXANE ND ND 2-CHLOROETHYL VINYL ETHER ND ND CHLOROMETHANE ND ND CHLOROMETHYL METHYL ETHER ND ND CHLOROMETHANE ND ND CHLOROMETHANE ND ND DIBROMOCHLOROMETHANE ND ND 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND 1,4-DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,2-DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,1-DICHLOROSTHANE ND ND 1,1-DICHLOROSTHYLENE ND ND TRANS-1,2-DICHLOROSTHYLENE ND ND 1,2-DICHLOROPROPYLENE ND	BROMOFORM	ND	ND
CHLORACETALDEHYDE ND ND CHLORAL ND ND CHLOROBENZENE ND ND CHLOROETHANE ND ND CHLOROFORM ND ND 1-CHLOROHEXANE ND ND 2-CHLOROETHYL VINYL ETHER ND ND CHLOROMETHANE ND ND CHLOROMETHYL WETHYL ETHER ND ND CHLOROMETHANE ND ND CHLOROMETHANE ND ND DIBROMOCHLOROMETHANE ND ND 1, 2-DICHLOROBENZENE ND ND 1, 3-DICHLOROBENZENE ND ND 1, 4-DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND 1, 1-DICHLOROETHANE ND ND 1, 2-DICHLOROETHANE ND ND 1, 1-DICHLOROETHYLENE ND ND 1, 2-DICHLOROPROPYLENE ND ND 1, 2, 2-TETRACHLOROETHANE ND ND 1, 1, 1, 2-TETRACHLOROETHANE <	BROMOETHANE	ND	ND
CHLORAL CHLOROBENZENE CHLOROBENZENE CHLOROFORM ND CHLOROFORM ND ND CHLOROHEXANE ND ND ND ND 1—CHLOROHEXANE ND ND ND ND CHLOROMETHANE ND ND CHLOROMETHANE ND ND ND CHLOROMETHANE ND ND ND DIBROMOCHLOROMETHANE ND	CARBON TETRACHLORIDE	ND	ND
CHLOROBENZENE ND ND ND ND CHLOROETHANE ND	CHLORACETALDEHYDE	ND	ND
CHLOROETHANE CHLOROFORM ND ND ND 1-CHLOROHEXANE ND CHLOROETHYL VINYL ETHER ND CHLOROMETHANE CHLOROMETHYL METHYL ETHER ND ND CHLOROMETHYL METHYL ETHER ND ND ND CHLOROTOLUENE ND DIBROMMETHANE ND	CHLORAL	ND	ND
CHLOROFORM ND ND 1-CHLOROHEXANE ND ND 2-CHLOROETHYL VINYL ETHER ND ND CHLOROMETHANE ND ND CHLOROTOLUENE ND ND DIBROMOCHLOROMETHANE ND ND DIBROMOMETHANE ND ND DIBROMOMETHANE ND ND 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND 1,4-DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,2-DICHLOROETHANE ND ND 1,1-DICHLOROETHANE ND ND 1,2-DICHLOROETHANE ND ND 1,1-2-TETRACHLOROETHANE ND ND 1,1,1-TETCHLOROETHANE ND	CHLOROBENZENE	ND	ND
1-CHLOROHEXANE 2-CHLOROETHYL VINYL ETHER 2-CHLOROETHYL VINYL ETHER ND ND ND CHLOROMETHANE ND ND ND CHLOROMETHYL METHYL ETHER ND ND ND DIBROMOCHLOROMETHANE ND	CHLOROETHANE	ND	ND
2-CHLOROETHYL VINYL ETHER ND ND CHLOROMETHANE ND ND CHLOROMETHYL METHYL ETHER ND ND CHLOROTOLUENE ND ND DIBROMOCHLOROMETHANE ND ND DIBROMOMETHANE ND ND 1,2-DICHLOROBENZENE ND ND ND ND ND 1,4-DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND ND ND ND 1,1-DICHLOROBENZENE ND ND ND ND ND 1,1-DICHLOROBENZENE ND ND 1,2-DICHLOROBENZENE ND ND 1,1-DICHLOROBENZENE ND ND 1,1-DICHLOROETHANE ND ND 1,1-DICHLOROETHYLENE ND ND 1,2-DICHLOROETHANE ND ND 1,3-DICHLOROETHANE ND ND 1,1,1-TETRACHLOROETHANE ND ND 1,1,1-TETRICHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND	CHLOROFORM	ND	ND
CHIOROMETHANE CHLOROMETHYL METHYL ETHER ND CHLOROTOLUENE DIBROMOCHLOROMETHANE ND DIBROMOMETHANE ND	1-CHLOROHEXANE	ND	ND
CHLOROMETHYL METHYL ETHER CHLOROTOLUENE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE ND ND ND ND ND ND ND ND ND	2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROTOLUENE ND ND ND ND DIBROMOCHLOROMETHANE ND	CHLOROMETHANE	ND	ND
DIBROMOCHLOROMETHANE DIBROMOMETHANE ND ND ND ND 1,2-DICHLOROBENZENE ND ND ND 1,3-DICHLOROBENZENE ND ND ND ND ND 1,4-DICHLOROBENZENE ND	CHLOROMETHYL METHYL ETHER	ND	ND
DIBROMOMETHANE 1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE ND 1,4-DICHLOROBENZENE ND ND ND ND 1,1-DICHLOROBENZENE ND ND 1,1-DICHLOROETHANE ND ND 1,2-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND ND ND 1,2-DICHLOROPROPANE ND ND 1,2-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHYLENE ND ND ND TI,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	CHLOROTOLUENE	ND	ND
1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND ND ND DICHLOROPROPANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TI,1,2-TRICHLOROETHANE ND ND ND TRICHLOROFLOROETHANE ND ND ND TRICHLOROFLOROETHANE ND ND ND TRICHLOROFLOROETHANE ND ND TRICHLOROFLOROMETHANE ND ND TRICHLOROFLOROMETHANE ND ND ND TRICHLOROFLOROMETHANE ND ND ND	DIBROMOCHLOROMETHANE	ND	ND
1,3-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND ND ND DICHLORODIFLUOROMETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPANE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 8.0 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	DIBROMOMETHANE	ND	ND
1,4-DICHLOROBENZENE ND ND ND DICHLORODIFLUOROMETHANE ND	1,2-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,1-DICHLOROETHYLENE 1,1-DICHLOROETHYLENE 1,1-DICHLOROETHYLENE 1,2-DICHLOROETHYLENE 1,2-DICHLOROPROPANE 1,3-DICHLOROPROPYLENE 1,1,2-TETRACHLOROETHANE 1,1,1,2-TETRACHLOROETHANE 1,1,1-TRICHLOROETHANE 1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,1-TRICHLOROETHANE 1,1	1,3-DICHLOROBENZENE	ND	ND
1,1-DICHLOROETHANE 1,2-DICHLOROETHANE ND ND 1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND DICHLOROMETHANE ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,4-DICHLOROBENZENE	ND	ND
1,2-DICHLOROETHANE 1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND TETRACHLOROETHANE ND ND ND 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE	DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHYLENE ND ND TRANS-1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE 0.53 0.63 1,1,1-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 8.0 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	1,1-DICHLOROETHANE	ND	ND
TRANS-1,2-DICHLOROETHYLENE ND	1,2-DICHLOROETHANE	ND	ND
DICHLOROMETHANE 1,2-DICHLOROPROPANE 1,3-DICHLOROPROPYLENE 1,1,2-TETRACHLOROETHANE 1,1,1,2-TETRACHLOROETHANE 1,1,1-TRICHLOROETHANE 1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,1-TRICHLOROETHANE 1	1,1-DICHLOROETHYLENE	ND	ND
1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE 0.53 0.63 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 8.0 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	TRANS-1, 2-DICHLOROETHYLENE	ND	ND
1,3-DICHLOROPROPYLENE ND ND 1,1,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE 0.53 0.63 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 8.0 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	DICHLOROMETHANE	ND	ND
1,1,2,2-TETRACHLOROETHANE 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE 0.53 0.63 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND TRICHLOROETHYLENE 8.0 3.2 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,2-DICHLOROPROPANE	ND	ND
1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE 0.53 0.63 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 8.0 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	1,3-DICHLOROPROPYLENE	ND	ND
TETRACHLOROETHYLENE 0.53 0.63 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 8.0 3.2 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 8.0 3.2 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,1,2-TETRACHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 8.0 3.2 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	TETRACHLOROETHYLENE	0.53	0.63
TRICHLOROETHYLENE 8.0 3.2 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,1-TRICHLOROETHANE	ND	NTD
TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROPROPANE ND ND	TRICHLOROETHYLENE	8.0	3.2
112 011201101 1101 1101	TRICHLOROFLUOROMETHANE	ND	ND
VINYL CHLORIDE ND ND	TRICHLOROPROPANE	ND	ND
	VINYL CHLORIDE	ND	ND

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010190

VF1,B-1,SS-1,0.5'

	Analysis	Results
TEST COMPOUND	Col 1	
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY) METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ИD	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	MD
1.3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1.2-DICHLOROETHANE	NĎ	ND
1,1-DICHLOROETHYLENE	ND	ND
TRANS-1, 2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1.2-DICHLOROPROPANE	ND	ND
1.3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	0.94	0.32
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	33	55
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND
	-	

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010191

VF1,B-1,SS-2,3.5'

	Analysis	Results
TEST COMPOUND	Col 1	Col 2
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY) METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ИD
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ИD
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1.1-DICHLOROETHYLENE	ND	ND
TRANS-1, 2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	0.70	0.86
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	17	24
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND
ATMIR CUROKINE	ND	WD.

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010192

VF1,B-1,SS-3,8.5'

TEST COMPOUND		Analysis	Results
BENZYL CHLORIDE BIS (2-CHLOROETHOXY)METHANE BIS (2-CHLOROISOPROPYL)ETHER BIS (2-CHLOROISOPROPYL)ETHER BIS (2-CHLOROISOPROPYL)ETHER BID ND BROMOBENZENE ND ND ND BROMOBENZENE ND ND ND BROMOGENAME BROMOCETHANE ND ND ND CARBON TETRACHLORIDE ND ND ND CHLORACETALDEHYDE ND ND ND CHLORAL CHLOROETHANE CH-OROETHANE CH-OROETHANE CH-OROETHANE CH-OROETHYL VINYL ETHER ND ND ND CHLOROMETHINE CHLOROMETHYL WETHYL ETHER ND ND ND CHLOROOTOLUENE DIBROMOCHLOROMETHANE ND ND ND ND ND ND ND ND ND	TEST COMPOUND	•	
BIS (2-CHLOROETHOXY)METHANE			
BIS (2-CHLOROISOPROPYL)ETHER	BENZYL CHLORIDE	ND	ND
BROMOBENZENE	BIS (2-CHLOROETHOXY) METHANE	ND	ND
BROMODICHLOROMETHANE BROMOFORM BROMOFORM BROMOETHANE CARBON TETRACHLORIDE CHORACETALDEHYDE CHLORAL CHLORAL CHLOROBENZENE CHLOROMETHANE CHLOROMETHANE CHLOROMETHANE CHLOROMETHANE DIBROMOCHLOROMETHANE DICHLOROBENZENE ND	BIS (2-CHLOROISOPROPYL)ETHER	ND	NTD
BROMOFORM	BROMOBENZENE	ND	ND
BROMCETHANE CARBON TETRACHLORIDE CHLORACETALDEHYDE ND ND ND ND ND ND ND ND ND	BROMODICHLOROMETHANE	ND	ND
CARBON TETRACHLORIDE CHLORACETALDEHYDE CHLORAL ND ND ND ND CHLORAL ND ND ND ND CHLOROBENZENE CHLOROSETHANE ND ND ND ND ND ND ND ND ND	BROMOFORM	ND	ND
CHLORACETALDEHYDE CHLORAL CHLOROBENZENE MD MD CHLOROBENZENE MD MD CHLOROBENZENE MD MD CHLOROBENZENE MD MD MD CHLOROBENZENE MD MD MD CHLOROBENZENE MD MD MD 1-CHLOROBENZENE MD MD MD 1-CHLOROBEXANE CHLOROBETHYL VINYL ETHER MD MD CHLOROMETHYL METHYL ETHER MD MD CHLOROMETHYL METHYL ETHER MD MD MD DIBROMOCHLOROBETHANE MD MD MD DIBROMOCHLOROBENZENE MD MD MD 1,2-DICHLOROBENZENE MD MD MD 1,4-DICHLOROBENZENE MD MD MD DICHLOROBIFLUOROMETHANE MD MD MD 1,1-DICHLOROBETHANE MD MD MD 1,2-DICHLOROBETHANE MD MD MD TRANS-1,2-DICHLOROETHYLENE MD MD MD TRANS-1,2-DICHLOROETHYLENE MD MD MD TRANS-1,2-TETRACHLOROETHANE MD MD MD TETRACHLOROPROPANE MD MD TETRACHLOROETHANE MD MD TETRACHLOROFTHANE MD MD TETRACHLOROFTHANE MD MD TETRACHLOROFTHANE MD MD TETRACHLOROETHANE MD MD TRICHLOROETHYLENE MD MD TRICHLOROFTUROROMETHANE MD MD TRICHLOROFTUROROMETHANE MD MD TRICHLOROFTUROROMETHANE MD MD TRICHLOROPROPANE	BROMOETHANE	ND	ND
CHLORAL CHLOROBENZENE CHLOROBENZENE CHLOROBENZENE CHLOROFORM ND ND ND CHLOROFORM ND ND ND 1-CHLOROHEXANE ND ND ND CHLOROHEXANE ND ND ND CHLOROMETHANE ND ND ND CHLOROMETHYL WINYL ETHER ND ND ND CHLOROMETHYL METHYL ETHER ND ND ND DIBROMOCHLOROMETHANE ND ND ND DIBROMOCHLOROMETHANE ND ND ND ND 1,2-DICHLOROBENZENE ND ND ND ND 1,3-DICHLOROBENZENE ND ND ND ND 1,1-DICHLOROBENZENE ND ND ND ND 1,1-DICHLOROBENZENE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHYLENE ND ND ND 1,2-DICHLOROFOPOPALE ND ND ND TRANS-1,2-DICHLOROFTHANE ND ND ND TRANS-1,2-DICHLOROFTHANE ND ND ND TRANS-1,2-DICHLOROFTHANE ND ND ND TRANS-1,2-DICHLOROFOPOPALE ND ND ND TRANS-1,2-TETRACHLOROETHANE ND ND TRICHLOROFTHYLENE ND ND TRICHLOROFTHYLENE ND ND TRICHLOROETHYLENE ND ND TRICHLOROFTHYLENE ND ND ND TRICHLOROFTHYLENE ND ND TRICHLOROFTHYLENE ND ND ND ND TRICHLOROFTHYLENE ND ND ND ND ND ND TRICHLOROFTHYLENE ND	CARBON TETRACHLORIDE	ND	ND
CHLOROBENZENE ND ND ND CHLOROETHANE ND ND ND CH OROFORM ND ND ND 1-CHLOROHEXANE ND ND ND 1-CHLOROETHYL VINYL ETHER ND ND ND CHLOROMETHANE ND ND ND CHLOROMETHYL METHYL ETHER ND ND ND DIBROMOCHLOROMETHANE ND ND ND DIBROMOCHLOROMETHANE ND ND ND 1,2-DICHLOROBENZENE ND ND ND 1,3-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND ND ND 1,4-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHYLENE ND ND ND 1,1-DICHLOROFOPANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,1,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHANE ND ND ND TRICHLOROFOPOPANE ND ND ND TRICHLOROFOPOPANE ND ND ND	CHLORACETALDEHYDE	ND	ND
CHLOROETHANE CH_OROFORM 1-CHLOROHEXANE 1-CHLOROHEXANE 1-CHLOROMETHYL VINYL ETHER ND CHLOROMETHYL WETHER ND ND ND CHLOROMETHYL METHYL ETHER ND ND CHLOROMETHYL METHYL ETHER ND DIBROMCHLOROMETHANE ND ND ND ND ND 1,2-DICHLOROBENZENE ND ND ND 1,3-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHANE ND ND TRANS-1,2-DICHLOROETHYLENE ND DICHLOROMETHANE ND ND TRANS-1,2-DICHLOROFOPPLENE ND ND ND 1,1-DICHLOROPOPPLENE ND ND ND 1,1-J-TETERACHLOROETHANE ND ND ND TETRACHLOROFTYLENE ND ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND TRICHLOROFOPOPANE ND ND	CHLORAL	ND	ND
CF OROFORM	CHLOROBENZENE	ND	ND
1-CHLOROHEXANE 2-CHLOROETHYL VINYL ETHER 2-CHLOROMETHANE CHLOROMETHANE CHLOROMETHYL METHYL ETHER ND CHLOROTOLUENE DIBROMOCHLOROMETHANE ND DIBROMOCHLOROBENZENE ND ND ND 1,2-DICHLOROBENZENE ND ND ND ND 1,3-DICHLOROBENZENE ND	CHLOROETHANE	ND	ND
2-CHLOROETHYL VINYL ETHER	CHTOROFORM	ND	ND
CHLOROMETHANE CHLOROMETHYL METHYL ETHER CHLOROTOLUENE DIBROMOCHLOROMETHANE DIBROMOMETHANE ND ND ND ND ND ND ND ND ND	1-CHLOROHEXANE	ND	ND
CHLOROMETHYL METHYL ETHER CHLOROTOLUENE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE ND ND ND ND ND ND ND ND ND	2-CHLOROETHYL VINYL ETHER	ND	ND
GHLOROTOLUENE ND ND DIBROMOCHLOROMETHANE ND ND DIBROMOMETHANE ND ND 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND DICHLOROBENZENE ND ND DICHLOROBITLUOROMETHANE ND ND 1,1-DICHLOROETHANE ND ND 1,2-DICHLOROETHYLENE ND ND DICHLOROMETHANE ND ND 1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPANE ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TERICHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND	CHLOROMETHANE	ND	ND
DIBROMOCHLOROMETHANE DIBROMOETHANE 1,2-DICHLOROBENZENE ND 1,3-DICHLOROBENZENE ND ND ND ND ND ND ND ND ND	CHLOROMETHYL METHYL ETHER	ND	ND
DIBROMOMETHANE 1,2-DICHLOROBENZENE ND ND ND 1,3-DICHLOROBENZENE ND ND ND ND 1,4-DICHLOROBENZENE ND ND ND ND DICHLORODIFLUOROMETHANE ND ND ND ND 1,1-DICHLOROETHANE ND ND ND ND 1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND DICHLOROMETHANE ND ND ND ND 1,2-DICHLOROPROPANE ND ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE ND ND ND TETRACHLOROETHANE ND ND ND TI,1,2-TETRACHLOROETHANE ND ND ND TTICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	CHLOROTOLUENE	ND	ND
1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND 1,4-DICHLOROBENZENE ND ND DICHLORODIFLUOROMETHANE ND ND 1,1-DICHLOROETHANE ND ND 1,2-DICHLOROETHYLENE ND ND 1,1-DICHLOROETHYLENE ND ND DICHLOROMETHANE ND ND 1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND	DIBROMOCHLOROMETHANE	ND	ND
1,3-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND ND ND DICHLORODIFLUOROMETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHANE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,2-DICHLOROPROPYLENE ND ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	DIBROMOMETHANE	ND	ND
1,4-DICHLOROBENZENE ND ND ND DICHLORODIFLUOROMETHANE ND ND ND ND 1,1-DICHLOROETHANE ND ND ND ND 1,2-DICHLOROETHANE ND ND ND ND ND TRANS-1,2-DICHLOROETHYLENE ND ND ND ND DICHLOROMETHANE ND	1,2-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND	1,3-DICHLOROBENZENE	ND	ND
1,1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE	1,4-DICHLOROBENZENE	ND	ND
1,2-DICHLOROETHANE ND ND 1,1-DICHLOROETHYLENE ND ND ND TRANS-1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE 0.58 0.38 1,1,1-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHYLENE ND ND TRANS-1,2-DICHLOROETHYLENE ND ND DICHLOROMETHANE ND ND 1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE 0.58 0.38 1,1,1-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	1,1-DICHLOROETHANE	ND	ND
TRANS-1, 2-DICHLOROETHYLENE ND	1,2-DICHLOROETHANE	ND	NTD
DICHLOROMETHANE 1,2-DICHLOROPROPANE 1,3-DICHLOROPROPYLENE 1,1,2-TETRACHLOROETHANE 1,1,1,2-TETRACHLOROETHANE 1,1,1-TRICHLOROETHANE 1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,1-TRICHLOROETHANE 1	1,1-DICHLOROETHYLENE	ND	ND
1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE 0.58 0.38 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 14 19 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	TRANS-1,2-DICHLOROETHYLENE	ND	ND
1,3-DICHLOROPROPYLENE ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE 0.58 0.38 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 14 19 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	DICHLOROMETHANE	ND	ND
1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE 0.58 0.38 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHANE 14 19 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	1,2-DICHLOROPROPANE	ND	ND
1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLEME 0.58 0.38 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLEME 14 19 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	1,3-dichloropropylene	ND	ND
TETRACHLOROETHYLEME 0.58 0.38 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLEME 14 19 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,2,2-tetrachloroethane	ND	ND
1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 14 19 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,1,2-TETRACHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 14 19 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	TETRACHLOROETHYLENE	0.58	0.38
TRICHLOROETHYLENE 14 19 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,1-TRICHLOROETHANE	ND	ND
TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROPROPANE ND ND	TRICHLOROETHYLENE	14	19
	TRICHLOROFLUOROMETHANE	ND	ND
VINYL CHLORIDE ND ND	TRICHLOROPROPANE	ND	ND
	VINYL CHLORIDE	ND	ИD

Detection Limits Halogenated Volatile Organics EPA Method 8010

Samples No.: 88010186 - 88010199

Compound	Detection Limits
Benzyl chloride	0.50 ug/Kg
bis (2-chloroethoxy)	J. J
methane	0.50
bis (2-chloroisopropyl)	
ether	0.50
Bromobenzene	0.50
Bromodichloromethane	0.10
Bromoform	0.20
Bromomethane	0.50
Carbon tetrachloride	0.12
Chloroacetaldehyde	0.50
Chloral	0.50
Chlorobenzene	0.25
Chloroethane	0.52
Chloroform	0.05
1-Chlorohexane	0.50
2-Chloroethyl vinyl ether	0.13
Chloromethane	0.08
Chloromethyl methyl ether	0.50
O-,m-,& p-Chlorotoluenes	0.50
Dibromochloromethane	0.09
Dibromomethane	0.50
1,2-Dichlorobenzene	0.15
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	0.50
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethylene	0.13
trans-1,2-Dichloroethylene	0.10
Dichloromethane	0.50
1,2-Dichloropropane	0.04
1,3-Dichloropropylene	0.34
1,1,2,2-Tetrachloroethane	0.03
i,1,1,2-Tetrachloroethane	0.50
Tetrachloroethylene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethylene	0.12
Trichlorofluoromethane	0.50
Trichloropropane	0.50
Vinyl chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/K6, SROUP 8010

	vF1,8-7,SS-3, 3.5'	VF1,8-6,SS-2, 3.5'	8.5'	VF1,B-7,SS-1, 0'	VF1,8-7,SS-2, 3.5'	
TEST COMPOUND	88010204	98010205	88010206	88010207	88010208	88010209
BENZYL CHLORIDE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY) METHANE	ND	ND	NO	ND	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND	ND	ND	ND	ND
BROMOBENZENE	ND	ND	ND	ND	ND	ND
9ROHODICHLGRONETHANE	ND	ND	ND	ND	ND	ND
BROHOFORM	ND	ND	ND	ND	ND	ND
BROMOETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLORACETALDEHYDE	ND	ND	ND	ND	ND	ND
*CHLBRAL	ND	ND	ND	ND	ND	ND
CHLGROBENZENE	ND	ND	ND	ND	ND	ND
CHLORGETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	MD	ND
1-CHLOROHEXANE	ND	ND	ND	ND	MD	ND
2-CHLOROETHYL VINYL ETHER	ND	MD	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	מא
CHLOROTOLUENE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	NB	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND -	ND	ND	ND	ND
1.4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLORGETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRANS-1.2-DICHLORDETHYLENE	D	OM	ND	ND	ND	ND
DICHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
1.3-DICHLGROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLORGETHAME	ND	ND	D	ND	ND	ND
TETRACHLOROETHYLENE	ND	NO	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORGETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	5.7	8.6	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	NO	ND	ND	ND	ND	ND

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/KG, GROUP 8010

	VF1,8-5,88-2,	VF1,8-5,88-3,	VF1,8-6,55-1.
TEGT COMBOLING	3.5′ 88010210	10.0′ 88010211	0′ 88010212
TEST COMPOUND	00010510		88010212
SENZYL CHLORIDE	ND	ND	QV.
BIS (2-CHLOROETHOXY) METHANE	ND	ND ND ND ND ND	ND
SIS (2-CHLOROISOPROPYL)ETHER	ND	ND	ND
BEOMOBENIENE	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND
BROMOFORM	ND	ND	ND
PROMOETHANE	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND
CHLGRACETALDEHYDE	ND	ND	ND
CHLORAL	ND	ND	ND
CHLOROBENZENE CHLOROETHANE CHLOROFORM	ND	ND	ND
CHLOROETHANE	ND	ND	ND
CHLOROFORM	ND	ND	ND
1-CHLOROHEXANE	ND	ND	ND
	ND	ND	ND
CHLOROMETHANE	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND
CHLOROTOLUENE	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND
DICHLORODIFLUGROMETHANE	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND	ND
DICHLOROMETHANE	ND	ND	ND
1,2-BICHLOROFROPANE	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	<i>Γ</i> : ")
1,1,1,2-TETRACHLURUETHANE	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	ND
2-CHLOROETHYL VINYL ETHER CHLOROMETHANE CHLOROMETHYL METHYL ETHER CHLOROTOLUENE DIBROMOCHLOROMETHANE DIBROMOMETHANE 1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE DICHLORODIFLUGROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHYLENE TRANS-1,2-DICHLOROETHYLENE DICHLOROMETHANE 1,2-GICHLOROPROPANE 1,3-DICHLOROPROPANE 1,1,2-TETRACHLOROETHANE 1,1,2-TETRACHLOROETHANE 1,1,1-TRICHLOROETHANE 1,1,1-TRICHLOROETHANE TETRACHLOROETHYLENE 1,1,1-TRICHLOROETHANE TRICHLOROFLUGROMETHANE TRICHLOROFLUGROMETHANE TRICHLOROFLUGROMETHANE TRICHLOROFLUGROMETHANE TRICHLOROFLUGROMETHANE TRICHLOROFLUGROMETHANE TRICHLOROFROPANE VINYL CHLORIDE	עא	ND ND	ND
1,1,2-IRICHLURUEIHANE	ND	ND	ND ND
IRIUHLURUE I HYLENE	ND	ND	ND
TRICHLURUHLUURUMETHANE	ND ND	ND	ND
IRICHLURUPRUPANE	ND	ND	ND ND
VINYL CHLORIDE	ND	ND	ND

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010205

VF1, B-6, SS-2, 3.5'

	Analysis	Results
TEST COMPOUND	Col 1	Col 2
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY) METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ИD	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE	ND	ND
1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	5.7	4.9
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND

179.3.4

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010206

VF1, B-6, SS-3, 8.5'

TEST COMPOUND		Analysis	Results
BENZYL CHLORIDE	TEST COMPOUND	•	
BIS (2-CHLOROETHOXY) METHANE			
BIS (2-CHLOROISOPROPYL)ETHER ND ND ND BROMOBENZENE ND ND ND ND BROMOBENZENE ND	BENZYL CHLORIDE	ND	ND
BROMOBENZENE BROMODICHLOROMETHANE BROMOFORM	BIS (2-CHLOROETHOXY)METHANE	ND	ND
### BROMODICHLOROMETHANE ND	BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOFORM BROMOETHAME CARBON TETRACHLORIDE CHLORAL CHLOROBENZENE CHLOROBENZENE ND ND ND ND ND ND ND ND ND	BROMOBENZENE	ND	ND
ND	BROMODICHLOROMETHANE	ND	ND
CARBON TETRACHLORIDE CHLORACETALDEHYDE ND ND CHLORAL ND ND CHLORABENZENE ND ND ND CHLOROFORM ND ND CHLOROFORM 1 - CHLOROHEXANE CHLOROETHANE ND ND ND CHLOROMETHANE ND ND CHLOROMETHANE ND ND ND DI BROMOMETHANE ND ND ND DI BROMOMETHANE ND ND ND DI LECHLOROMETHANE ND ND ND TI, 2-DICHLOROBENZENE ND ND ND ND TI, 4-DICHLOROBENZENE ND ND ND ND TI, 1-DICHLOROBENZENE ND ND ND TI, 1-DICHLOROSETHANE ND ND ND TI, 1-DICHLOROETHANE ND ND ND TI, 2-DICHLOROETHANE ND ND ND TI, 2-DICHLOROETHALE ND ND ND TI, 1-DICHLOROFOPANE ND ND ND TI, 1, 2, 2-TETRACHLOROETHANE ND ND TETRACHLOROETHANE ND ND ND TETRACHL	BROMOFORM	.ND	ND
CHLORACETALDEHYDE CHLORAL ND ND CHLOROBENZENE ND ND ND CHLOROBENZENE ND ND ND CHLOROFTHANE ND ND ND ND CHLOROFORM ND ND ND ND CHLOROFORM ND ND ND ND CHLOROHEXANE ND ND ND CHLOROMETHANE ND ND ND CHLOROMETHYL METHYL ETHER ND ND DI BROMOCHLOROMETHANE ND ND ND 1, 2-DICHLOROBENZENE ND ND ND 1, 3-DICHLOROBENZENE ND ND ND 1, 4-DICHLOROBENZENE ND ND ND 1, 1-DICHLOROBENZENE ND ND ND 1, 2-DICHLOROMETHANE ND ND ND 1, 1-DICHLOROBENZENE ND ND ND 1, 1-DICHLOROBENZENE ND ND ND 1, 2-DICHLOROBENZENE ND ND ND 1, 1-DICHLOROETHANE ND ND ND 1, 1-DICHLOROETHANE ND ND ND 1, 1-DICHLOROETHYLENE ND ND ND 1, 1-DICHLOROPOPANE ND ND ND TETRACHLOROFTHANE ND ND ND TETRACHLOROETHANE ND ND ND TETRACHL	BROMOETHANE	ND	ND
CHLORAL	CARBON TETRACHLORIDE	ND	ND
CHLOROBENZENE ND ND ND CHLOROFTHANE ND ND ND CHLOROFTHANE ND ND ND CHLOROFORM ND	CHLORACETALDEHYDE	ND	ND
CHLOROFTANE CHLOROFORM 1-CHLOROFORM ND 1-CHLOROFEXANE 2-CHLOROETAYL VINYL ETHER ND CHLOROMETHANE ND ND ND CHLOROMETHANE ND ND ND CHLOROMETHYL METHYL ETHER ND DI BROMOCHLOROMETHANE ND ND ND 1,2-DICHLOROBENZENE ND 1,3-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND ND ND ND 1,1-DICHLOROBENZENE ND ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHANE ND ND ND ND ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHYLENE ND ND ND 1,2-DICHLOROPROPANE ND ND ND ND ND ND ND ND ND	CHLORAL	ND	ND
CHLOROFORM	CHLOROBENZENE	ND	ND
1-CHLOROHEXANE 2-CHLOROETHYL VINYL ETHER 2-CHLOROMETHANE 3-CHLOROMETHANE 3-CHLOROETHANE 3-CHLOROETHANE 3-CHLOROETHYLENE 3-CHLOROMETHANE 3-CHLO	CHLOROETHANE	ND	ND
2-CHLOROETHYL VINYL ETHER ND ND ND CHLOROMETHANE ND ND ND ND CHLOROMETHYL METHYL ETHER ND ND ND ND CHLOROMETHYL METHYL ETHER ND ND ND ND CHLOROTOLUENE ND	CHLOROFORM	ND	ND
CHLOROMETHANE CHLOROMETHYL METHYL ETHER CHLOROTOLUENE DI BROMOCHLOROMETHANE DI BROMOCHLOROMETHANE ND ND ND ND ND ND 1,2-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND ND ND 1,1-DICHLOROBENZENE ND ND ND 1,2-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHYLENE ND ND ND ND 1,2-DICHLOROFTHYLENE ND ND ND ND ND 1,2-DICHLOROPROPANE ND ND ND ND ND ND ND ND ND	1-CHLOROHEXANE	ND	ND
CHLOROMETHYL METHYL ETHER CHLOROTOLUENE DI BROMOCHLOROMETHANE DI BROMOCHLOROMETHANE ND ND ND ND ND ND ND ND ND	2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROTOLUENE ND ND ND ND DIBROMOCHLOROMETHANE ND	CHLOROMETHANE	ND	ND
DIBROMOCHLOROMETHANE DIBROMOMETHANE 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND 1,4-DICHLOROBENZENE ND DICHLOROBENZENE ND ND ND ND ND ND ND ND ND	CHLOROMETHYL METHYL ETHER	ND	ND
DIBROMOMETHANE ND ND 1,2-DICHLOROBENZENE ND ND 1,3-DICHLOROBENZENE ND ND 1,4-DICHLOROBENZENE ND ND DICHLORODIFLUOROMETHANE ND ND 1,1-DICHLOROETHANE ND ND 1,2-DICHLOROETHYLENE ND ND 1,2-DICHLOROETHYLENE ND ND 1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND 1,1,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,1-TRICHLOROETHANE ND ND <td>CHLOROTOLUENE</td> <td>ND</td> <td>ND</td>	CHLOROTOLUENE	ND	ND
1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND ND ND DICHLORODIFLUOROMETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHYLENE ND	DIBROMOCHLOROMETHANE	ND	ND
1,3-DICHLOROBENZENE ND ND ND 1,4-DICHLOROBENZENE ND ND ND DICHLORODIFLUOROMETHANE ND ND ND 1,1-DICHLOROETHANE ND ND ND 1,2-DICHLOROETHYLENE ND ND ND 1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPALENE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TRICHLOROETHANE ND ND ND 1,1,1,2-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	DIBROMOMETHANE	ND	ND
1,4-DICHLOROBENZENE ND ND DICHLORODIFLUOROMETHANE ND ND 1,1-DICHLOROETHANE ND ND 1,2-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHYLENE ND ND ND 1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2-TETRACHLOROETHANE ND ND ND 1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE ND ND ND 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPTOPANE ND ND ND	1, 2-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE ND ND 1,1-DICHLOROETHYLENE ND ND ND 1,2-DICHLOROETHYLENE ND ND ND ND ND ND ND ND ND	1,3-DICHLOROBENZENE	ND	ND
1,1-DICHLOROETHANE 1,2-DICHLOROETHANE ND ND 1,1-DICHLOROETHYLENE ND ND ND 1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND ND	1,4-DICHLOROBENZENE	ND	ND
1,2-DICHLOROETHANE ND ND ND 1,1-DICHLOROETHYLENE ND	DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHYLENE ND ND 1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE ND ND ND 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	1,1-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE ND ND 1,2-DICHLOROETHYLENE ND ND ND DICHLOROMETHANE ND ND ND 1,2-DICHLOROPROPANE ND ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE ND ND ND 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE ND ND ND TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	1,2-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHYLENE ND ND DICHLOROMETHANE ND ND 1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND ND 1,1,2,2-TETRACHLOROETHANE ND ND ND 1,1,1,2-TETRACHLOROETHANE ND ND ND TETRACHLOROETHYLENE ND ND ND 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROFLUOROMETHANE ND ND ND	1.1-DICHLOROETHYLENE	ND	ND
1,2-DICHLOROPROPANE ND ND 1,3-DICHLOROPROPYLENE ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE ND ND ND 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	•	ND	ND
1,3-DICHLOROPROPYLENE ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE ND ND ND 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	DICHLOROMETHANE	ND	ND
1,3-DICHLOROPROPYLENE ND ND 1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE ND ND ND 1,1,1-TRICHLOROETHANE ND ND ND 1,1,2-TRICHLOROETHANE ND ND ND TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND ND TRICHLOROPROPANE ND ND	1.2-DICHLOROPROPANE	ND	ND
1,1,2,2-TETRACHLOROETHANE ND ND 1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	1.3-DICHLOROPROPYLENE	ND	ND
1,1,1,2-TETRACHLOROETHANE ND ND TETRACHLOROETHYLENE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	•	ND	ND
TETRACHLOROETHYLENE ND ND 1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND		ND	ND
1,1,1-TRICHLOROETHANE ND ND 1,1,2-TRICHLOROETHANE ND ND TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	TETRACHLOROETHYLENE		
1,1,2-trichloroethaneNDNDtrichloroethylene8.63.2trichlorofluoromethaneNDNDtrichloropropaneNDND			- · -
TRICHLOROETHYLENE 8.6 3.2 TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	• •	ND	NTD
TRICHLOROFLUOROMETHANE ND ND TRICHLOROPROPANE ND ND	TRICHLOROETHYLENE	- -	
TRICHLOROPROPANE ND ND			
	TRICHLOROPROPANE	_	ND
	VINYL CHLORIDE	ND	ND

179.3.5

Detection Limits Halogenated Volatile Organics EPA Method 8010

Sample(s) No.: 88010204-88010212

Compound	Detection Limits
Benzyl chloride	0.50 ug/Kg
bis (2-chloroethoxy)	
methane	0.50
bis (2-chloroisopropyl)	
ether	0.50
Bromobenzene	0.50
Bromodichloromethane	0.10
Bromoform	0.20
Bromomethane	0.50
Carbon tetrachloride	0.12
Chloroacetaldehyde	0.50
Chloral	. 0.50
Chlorobenzene	0.25
Chloroethane	0.52
Chloroform	0.05
1-Chlorohexane	0.50
2-Chloroethyl vinyl ether	0.13
Chloromethane	0.08
Chloromethyl methyl ether	0.50
O-,m-,& p-Chlorotoluenes	0.50
Dibromochloromethane	0.09
Dibromomethane	0.50
1,2-Dichlorobenzene	0.15
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	0.50
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethylene	0.13
trans-1,2-Dichloroethylene	0.10
Dichloromethane	0.50
1,2-Dichloropropane	0.04
1,3-Dichloropropylene	0.34
1,1,2,2-Tetrachloroethane	0.03
1,1,1,2-Tetrachloroethane	0.50
Tetrachloroethylene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethylene	0.12
Trichlorofluoromethane	0.50
Trichloropropane	0.50
Vinyl chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

179.3.1

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 4, UNITS: ug/K6, SROUP 8010

	VF1,8-26,SS-1,	VF1,B-9,SS-2, 3.5'	VF1,8-9,SS-3, 8.5'	VF1,B-8,SS-1,	VF1,8-9,SS-2, 3.5'	VF1,9-9,58-3, 8.5'
TEST COMPOUND	98010214	68010215	S8010216	88010217	58010218	88010219
BENZYL CHECREDE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY) METHANE	ND	ND	ND	ND	ND	ND
BIS (2-CHLORDISOPROPYL)ETHER	ND	ND	ND	ND	ND.	ND
BROMOBENZENE	ND	ND	ND	D	ND	ND
BROHODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
SROMOFORM	ND	ND	ND	ND	ND	ND
BROMOETHANE	ND	MD	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ON	ND	ND	ND	ND
CHLORACETALDEHYDE	ND	ND	4D	ND	DК	ND
CHLORAL	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND.	ND	ND	ND	ND	ND
CHLORGETHANE	ND	ND	NO	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
1-CHLOROHEXANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	ND
CHLCROTOLUENE	ND	ND	ND	ND	ND	٧D
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	מא	ND	ND	D	OP
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	מא	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLORGETHANE	ND	ND	ND	ND CH	ND	D
1,2-DICHLORGETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLORGETHYLENE	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE	ND	ND	ND	ND	ND	ND
1.2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLORGETHANE	HD	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLORGETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	ND	ND	ND	ND	ON
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	D	ND	ND	D	ND
VINYL CHEORIDE	ND	ND	ND	ND	ND	ND

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 4, UNITS: ug/KG, GROUP 8010

	VF1,8-9,3S-1,
TEST COMPOUND	01 88010220
BENZYL CHUORIDE	ND
518 (2-CHLORGETHOXY) METHANE	ND
315 CHCHLOROISOPROPYL) ETHER	ND
BROMOBENZENE	ND
SROMODICHLOROMETHANE	ND
PROMOFORM	ND
BROMOETHANE	ND
CARBON TETRACHLORIDE	ND
CHLORACETALDEHYDE	ND
CHLORAL	ND
CHLOROSENZENE	ND
CHLOROETHANE	ND
CHLOROFORM	ND
1-CHLOROHEXANE	ND NO
2-CHLOROETHYL VINYL ETHER CHLOROMETHANE	ND
CHLOROMETHYL METHYL ETHER	ND ND
CHLOROTOLUENE	ND
DIBROMOCHLOROMETHANE	ND
DIBROMOMETHANE	ND
1,2-DICHLOROBENZENE	ND
1,3-DICHLOROBENZENE	ND
1.4-DICHLOROBENZENE	ND
DICHLOFODIFLUOROMETHANE	ND
1,1-DICHLOROETHANE	ND
1,2-DICHLOROETHANE	ND
1,1-DICHLORDETHYLENE	ND
TRANS-1,2-DICHLOROETHYLENE	ND
DICHLORÓMETHANE	ND
1,2-DICHLOROPROPANE	ND
1,3-DICHLOROPROPYLENE	ND
1,1,2,2-TETRACHLOROETHANE	ND
1,1,1,2-TETRACHLOROETHANE	ND
TETRACHLOR OETHYLENE	ND
1,1,1-TRICHLOROETHANE	ND
1,1,2-TRICHLOROETHANE	ND
TRICHLOROETHYLENE	ND
TRICHLOROFLUOROMETHANE	ND
TRICHLOROPROPANE	ND
VINYL CHLORIDE	ND

Detection Limits Halogenated Volatile Organics EPA Method 8010

Sample(s) No.: 88010214-88010220

Compound	Detection	Limits
Benzyl chloride	0.50	ug/Kg
bis (2-chloroethoxy)		
methane	0.50	
bis (2-chloroisopropyl)		
ether	0.50	
Bromobenzene	0.50	
Bromodichloromethane	0.10	
Bromoform	0.20	
Bromomethane	0.50	
Carbon tetrachloride	0.12	
Chloroacetaldehyde	0.50	
Chloral	0.50	
Chlorobenzene	0.25	
Chloroethane	0.52	
Chloroform	0.05	
1-Chlorohexane	0.50	
2-Chloroethyl vinyl ether	0.13	
Chloromethane	0.08	
Chloromethyl methyl ether	0.50	
O-,m-,& p-Chlorotoluenes	0.50	
Dibromochloromethane	0.09	
Dibromomethane	0.50	
1,2-Dichlorobenzene	0.15	
1,3-Dichlorobenzene	0.32	
1,4-Dichlorobenzene	0.24	
Dichlorodifluoromethane	0.50	
1,1-Dichloroethane	0.07	
1,2-Dichloroethane	0.03	
1,1-Dichloroethylene	0.13	
trans-1,2-Dichloroethylene	0.10 0.50	
Dichloromethane		
1,2-Dichloropropane	0.04	
1,3-Dichloropropylene	0.34 0.03	
1,1,2,2-Tetrachloroethane	0.03	
1,1,1,2-Tetrachloroethane	0.50	
Tetrachloroethylene	0.03	
1,1,1-Trichloroethane	0.03	
1,1,2-Trichloroethane	0.02	
Trichloroethylene	0.12	
Trichlorofluoromethane	0.50	
Trichloropropane	0.30	
Vinyl chloride	5	•
Freon 113	J	

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

179.5.1

ENGINEERING SCIENCE INC. 04/19/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/K6, GROUP 8010

TEST COMPOUND	VF1,8-10,5S-1, 0.3' 88020289	VF1,8-27,SS-1, 0.5' 88020290	VF1,B-10,SS-2, 3.5' 88020291	VF1,B-10,SS-3, 8.5' 88020292	VF1,B-11,SS-1, 1.0' 88020293	√F1,3-11,33-2 3.5′ 88020294
BENZYL CHLORIDE	ND	D	ND	ND	ND	ND
BIS (2-CHLGROETHOXY) METHANE	ND	ND	ND	ND	ND	ND
BIS (2-CHLORGISOPROPYL) ETHER	ND	ND	ND	ND	ND	OV
BROMOBENZENE	ND	ND	ND	4D	ND	ND
3ROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND OF
SROMOFORM	סא	ND	ND	OP	ND	ND
BROMOETHANE	ND	ND	ND	ON	ND	ND
CARBON TETRACHLORIDE	VD	ND	ND	ND	ND	ND
CHLORACETALDEHYDE	ND	ND	ND	ND	ND	ND THE
CHLCRAL	ND	ND	ND	ND	ar	ND
CHLOROBENZENE	NO	ND	ND	ND	ND CV	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	D	ND
1-CHLORCHEXANE	40	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
CHECROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	Or
CHLOROTOLUENE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND OF	ND .	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND OF
1,3-DICHLOROBENZENE	ND	ND	ND	ND	D	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	DV.
DICHLORODIFLUGROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLORGETHANE	ND	ND	ND	ND	4D	ND
1,2-DICHLORGETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND	ND	ND ND	ND NO
TRANS-1,2-DICHLOROETHYLENE	AD On	ND ND	ND ND	ND ND	ND ND	ND D
DICHLGROMETHANE 1,2-DICHLOROPROPANE	ND	ND	ND	4D	ND	ND ND
•	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE 1,1,2,2-TETRACHLOROETHANE	ND	ND	ND OF	ND	ND	ND
1,1,1,2-TETRACHLORGETHANE	ND	ND	ND	ND	ND	ND
	ND	ND	ND	ND	ND	ND
TETRACHLORGETHYLENE 1,1,1-TRICHLORGETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLORGETHYLENE	ND D	ער ND	ND	ND	ND.	פא
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	40
TRICHLOROPROPANE	ND	ND	ND	ND	ND	ND
	ND ND	ND	ND ND	4D	NO	ND
VINYL CHLORIDE	MU	AU.	NU	₹₩	NV	.10

ENGINEERING SCIENCE INC. 04/19/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/KG, GROUP 8010

	VF1,8-11,SS-3,	VF1,8-12,SS-1	∀F1,8-12,SS-2, 3.5'	VF1,B-12,SS-3, 8.5'	VF1,8-13,SS-1,	VF1,3-28,SS-1,
TEST COMPOUND	88020295	88020296	98020297	88020298	8020299	38020300
BENZYL CHLORIDE	ND	ND	ND OK	ND	ND	ND
BIS (2-CHLOROETHOXY) METHANE	D	ND	ND	ND	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND	ND	ND	ND	ND
BROMOBENZENE	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	OP
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLORACETALDEHYDE	ND	ND	ND	ND	ND	ND
CHLORAL	ND	ND	ND	ND	ND	ND
CHLGROBENZENE	ND	ND	ND	ND	ND	MD
CHLOROETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	MD	ND	ND
:-CHLOROHEXANE	ND	ND	ND	ND	ND	MD
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROTOLUENE	NO	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHAME	ND	ND	ND	ND	ND	ND
1,1-DICHLORGETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND .	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND	ND	ND	ND	D
DICHLOROMETHANE	ND	ND	ND	ND	ND	40
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	D	ND	ND	ND
1,1,1,2-TETRACHLORUETHAME	ND	ND	۵۲	ND	ND	AD
TETRACHLOROETHYLENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLORGETHYLENE	3.3	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

TASK: 4, UNITS: ug/kg, GROUP 8010

88020295

VF1, B-11, SS-3, 8.5'

ENZYL CHLORIDE IS (2-CHLOROETHOXY) METHANE IS (2-CHLOROISOPROPYL) ETHER ROMOBENZENE ROMODICHLOROMETHANE ROMOFORM ROMOETHANE ARBON TETRACHLORIDE HLORACETALDEHYDE	COL 1 ND ND ND ND ND ND ND ND ND N	ND
ENZYL CHLORIDE IS (2-CHLOROETHOXY)METHANE IS (2-CHLOROISOPROPYL)ETHER ROMOBENZENE ROMODICHLOROMETHANE ROMOFORM ROMOETHANE ARBON TETRACHLORIDE HLORACETALDEHYDE	ND ND ND ND ND ND ND	ND ND ND ND ND ND
IS (2-CHLOROETHOXY)METHANE IS (2-CHLOROISOPROPYL)ETHER ROMOBENZENE ROMODICHLOROMETHANE ROMOFORM ROMOETHANE ARBON TETRACHLORIDE HLORACETALDEHYDE HLORAL	ND ND ND ND ND ND ND	ND ND ND ND ND ND
IS (2-CHLOROISOPROPYL)ETHER ROMOBENZENE ROMODICHLOROMETHANE ROMOFORM ROMOETHANE ARBON TETRACHLORIDE HLORACETALDEHYDE HLORAL	ND ND ND ND ND ND	ND ND ND ND ND ND
ROMOBENZENE ROMODICHLOROMETHANE ROMOFORM ROMOETHANE ARBON TETRACHLORIDE HLORACETALDEHYDE HLORAL	ND ND ND ND ND ND	ND ND ND ND ND
ROMODICHLOROMETHANE ROMOFORM ROMOETHANE ARBON TETRACHLORIDE HLORACETALDEHYDE HLORAL	ND ND ND ND ND	ND ND ND ND
ROMOFORM ROMOETHANE ARBON TETRACHLORIDE HLORACETALDEHYDE HLORAL	ND ND ND ND ND	ND ND ND
ROMOETHANE ARBON TETRACHLORIDE HLORACETALDEHYDE HLORAL	ND ND ND ND	ND ND
ARBON TETRACHLORIDE HLORACETALDEHYDE HLORAL	ND ND ND	ND ND
HLORACETALDEHYDE HLORAL	ND ND	ND
HLORAL	ND	_
	ND	MD
HLOROBENZENE		ND
HLOROETHANE	ND	ND
HLOROFORM	ND	ND
-CHLOROHEXANE	ND	ND
-CHLOROETHYL VINYL ETHER	ИĎ	ND
HLOROMETHANE	ND	ND
HLOROMETHYL METHYL ETHER	MD	ND
hlorotoluene	ND	ND
I BROMOCHLOROMETHANE	ND	ND
Ibromomethane	ND	ИD
, 2-DICHLOROBENZENE	ND	ND
, 3-DICHLOROBENZENE	ND	ND
.4-DICHLOROBENZENE	ND	ND
ICHLORODIFLUOROMETHANE	ND	ND
, 1-DICHLOROETHANE	ND	ND
.2-DICHLOROETHANE	ND	ND
, 1-DICHLOROETHYLENE	ND	ND
.2-DICHLOROETHYLENE	ND	ND
ICHLOROMETHANE	ND	ND
. 2-DICHLOROPROPANE	ND	ИD
.3-DICHLOROPROPYLENE	ND	ND
,1,2,2-TETRACHLOROETHAME	ND	ND
, 1, 1, 2-TETRACHLOROETHANE	NTD	ND
etrachloroethylene	ND	ND
, 1, 1-TRICHLOROETHANE	ND	ND
,1,2-TRICHLOROETHANE	ND	ND
richloroethylene	3.3	3.2
richlorofiuoromethane	ND	ND
RICHLOROPEDOROMETRAND RICHLOROPROPANE	ND	ND
RICHLOROPROPANE INYL CHLORIDE	ND	ND

179.2.4

Detection Limits Halogenated Volatile Organics EPA Method 8010

Sample(s) No.: 88020289-88020300

Compound	Detection Limits
Benzyl chloride	0.50 ug/Kg
bis (2-chloroethoxy)	0.50 dg/ kg
methane	0.50
bis (2-chloroisopropyl)	0.30
ether	0.50
Bromobenzene	0.50
Bromodichloromethane	0.10
Bromoform	0.20
Bromomethane	0.50
Carbon tetrachloride	0.12
Chloroacetaldehyde	0.50
Chloral	0.50
Chlorobenzene	0.25
Chloroethane	0.52
Chloroform	0.05
1-Chlorohexane	0.50
2-Chloroethyl vinyl ether	0.13
Chloromethane	0.08
Chloromethyl methyl ether	0.50
O-,m-,& p-Chlorotoluenes	0.50
Dibromochloromethane	0.09
Dibromomethane	0.50
1,2-Dichlorobenzene	0.15
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	0.50
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethylene	0.13
trans-1,2-Dichloroethylene	0.10
Dichloromethane	0.50
1,2-Dichloropropane	0.04
1,3-Dichloropropylene	0.34
1,1,2,2-Tetrachloroethane	0.03
1,1,1,2-Tetrachloroethane	0.50
Tetrachloroethylene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethylene	0.12
Trichlorofluoromethane	0.50
Trichloropropane	0.50
Vinyl chloride	0.18
Freon 113	5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

179.2.1

500

ENGINEERING SCIENCE INC. 04/19/88

ANALYSIS REPORT FOR WORK ORDER NUMBER

TASK: 4, UNITS: ug/K6, GROUP 8010

		VF1,8-15,SS-1,				
	2,5	0.5'	3.5'	8.5'	3.5'	3.5 [']
TEST COMPOUND	38020371	88020372	88020373	98020374	88020375	38020376
BENZYL CHLORIDE	ND	ND	ND	ND	VD O	ND
BIS (2-CHEORDETHOXY) METHANE	ND	ND	ND	ND	ND	ND
BIS (2-CHLGRGISGPROPYL) STHER	ND	ND	ND	ND	ND	VD.
BROMOBENZENE	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
9ROMOFORM	ND	ND	ND	ND	ND	ND
BROMGETHANE	ND	ND	ND.	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	HD	DM	ND
CHLORACETALDEHYDE	40	ND	ND	ND	ND	D
CHLORAL	ND	ND	ND	ND	מא	ND
CHLOROBENZENE	ND	ND	ND	OM	ND	ND
CHLORGETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND OF	ND	ND	ND	ND
1-CHLOROHEXANE	ND	ND	ND	ND	MD	ON
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	MD	ND	OP
CHLOROMETHYL METHYL STHER	ND	ND	ND	ND	ND	OP
CHEOROTOLUENE	NO	ND	ND	ND	DM	NO
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	P	ND	ND	ND	ND	40
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	D	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	AD.	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	MD
1,1-DICHLORGETHANE	D	ND	ND	ND	ND	ND
:,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	D	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND _
DICHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	MD	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHAME	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLGROETHAME	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLORGETHAME	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	סא	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 4, UNITS: ug/KG, GROUP 8010

	VF1,8-14,5S-1,	3.5′
TEST COMPOUND	88020377	88020378
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY) METHANE	ND	ND
BIS (2-CHLORDISOPROPYL)ETHER	ND	ND
3ROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
SROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ИD
CHLORAL	ND	ND
CHLGROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLORGMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	МĎ
1,1-DICHLOROETHYLENE	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND

Detection Limits Purgeable Halocarbons EPA 601

Samples No.: 88020371 - 88020378

Compound	Detection Limits
Bromodichloromethane	0.10 ug/Kg
Bromoform	0.20
Bromomethane	1.18
Carbon tetrachloride	0.12
Chlorobenzene	0.25
Chloroethane	0.52
2-Chloroethyl vinyl ether	0.13
Chloroform	0.05
Chloromethane	0.08
Dibromochloromethane	0.09
1,2-Dichlorobenzene	0.18
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	1.81
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethene	0.13
trans-1,2-Dichloroethene	0.10
1,2-Dichloropropane	0.04
cis-1,3-Dichloropropene	0.20
trans-1,3-Dichloropropene	0.34
Methylene chloride	0.25
1,1,2,2-Tetrachloroethane	0.03
Tetrachloroethene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethene	0.12
Trichlorofluoromethane	0.50
Vinyl Chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

DETECTION LIMITS HALOGENATED VOLATILE ORGANICS EPA METHOD 8010

SAMPLES NO.: 88020371-88020378

Compound	Detection Limits
Benzyl chloride	0.50 ug/Kg
bis(2-chloroethoxy)methane	0.50
bis(2-chloroisopropyl)ether	0.50
Bromobenzene	0.50
Bromodichloromethane	0.10
Bromoform	0.20
Bromomethane	0.50
Carbon Tetrachloride	0.12
Chloroacetaldehyde	0.50
Chloral	0.50
Clorobenzene	0.25
Chloroethane	0.52
Cloroform	0.05
1-Chlorohexane	0.50
2-Chloroethyl vinyl ether	0.13
Cloromethane	0.08
Chloromethyl methyl ether	0.05
O-,m-,& p-Chlorotoluenes	0.50
Dibromochloromethane	0.09
Dibromomethane	0.50
1,2-Dichlorobenzene	0.15
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	0.50
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethylene	0.13
trans-1,2-Dichloroehtylene	0.10
Dichloromethane	0.50
1,2-Dichloropropane	0.04
1,3-Dichlorophyopylene	0.34
1,1,2,2-Tetrachloroethane	0.03
1,1,1,2-Tetrachloroethane	0.50
Tetrachloroethylene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethylene	0.12
Trichlorofluoromethane	0.50
Trichloropropane	0.50
Vinyl chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 530

TASK: 4, _NITS: ug/L, GROUP 601

	VF,2-W1,6W1,ES	VF,1-#4,6W1,ES	VF,1-W5,6W1,ES	VF,2-W2,6W1,ES	VF,1-W1,3W1,ES	VF,3/6-W1,8W1, ES
TEST COMPOUND	38030536	88030537	88030538	88030539	38030540	38030541
BROMODICHLORGMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ИD	ND	OP
SROMOMETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	D	ND	AD.	D
CHLOROBENZENE	ND	ND	ND	ND	GP	AD GA
CHLGROSTHANE	ND	ND	D	ND	מא	ND
2-CHECROETHYEVINYE ETHER	D	ON	ND	ND	ND	ND
CHLGROFORM	ND	MD	ND	MD	ND	ND
CHLOROMETHANE	ON	ND	ND	ND	מא	ND
SIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	D	ND	ND	ND	ND
1,3-DICHLOROBENZENE	AD.	ND	ND	ND	D	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	NO	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLGROETHANE	OP	D	D	ND	DM	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	OP	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND.	ND	ND	ND	DM
TRANS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	DK	ND	ND	ND	ND
TETRACHLOROETHENE	OK	D	ND	DM	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	NO	ND	ND	ND	ND	ND
TRICHLOROETHENE	OP	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	ON	ND	ND	ND	ND	ND
VINYL CHLORIDE	4D	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 530

TABK: 4, UNITS: ug/L, GROUP 601

	VF,11-W3,GW1,ES
TEST COMPOUND	88030542
BROMODICHLOROMETHANE BROMOFORM	ND
SROMOMETHANE	ND ND
CARBON TETRACHLORIDE	ND
CHLOROBENZENE	ND
CHLOROETHANE	ND
S-CHLOROETHYLV (NYL ETHER	ND
CHLOROFORM	ND
CHLOROMETHANE	ИD
DIBROMOCHLOROMETHANE	ND
1,2-DICHLOROSENZENE	ND
1,3-DICHLOROBENZENE	ND
1,4-DICHLOROBENZENE	ND
DICHLORODIFLUOROMETHANE	ND
1,1-DICHLOROETHANE	ND
1,2-DICHLOROETHANE	ND
1,1+01CHLOROETHENE	ND
TRANS-1,2-DICHLOROETHENE	ND
1,2-DICHLOROPROPANE	D
CIS-1,3-DICHLOROPROPENE	ND
TRANS-1,3-01CHLOROPROPENE	ND
METHYLENE CHLORIDE	ND ND
1,1,2,2-TETRACHLOROETHANE	ND .
TETRACHLOROETHENE	ND ND
1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE	ND
TRICHLOROETHENE	ND
TRICHLOROFLUOROMETHANE	ND
VINYL CHLORIDE	ND
TITLE SHESHING	, ,

Detection Limits Purgeable Halocarbons EPA 601

Samples No.: 88030536 ~ 88030542

Compound	Detection Limits
Bromodichloromethane	0.10 ug/L
Bromoform	0.20
Bromomethane	1.18
Carbon tetrachloride	0.12
Chlorobenzene	0.25
Chloroethane	0.52
2-Chloroethyl vinyl ether	0.13
Chloroform	0.05
Chloromethane	0.08
Dibromochloromethane	0.09
1,2-Dichlorobenzene	0.18
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	1.81
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethene	0.13
trans-1,2-Dichloroethene	0.10
1,2-Dichloropropane	0.04
cis-1,3-Dichloropropene	0.20
trans-1,3-Dichloropropene	0.34
Methylene chloride	0.25
1,1,2,2-Tetrachloroethane	0.03
Tetrachloroethene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethene	0.12
Trichlorofluoromethane	0.50
Vinyl Chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 538

TASK: 4, UNITS: ug/L, GROUP 601

VF,ET-5,GM1,ES VF,ET-4,GM1,ES VF,13-W1,GM1,ES VF,ET-7,GM1,ES VF,ET-6,GM1,ES VF,11-W6,3W1,ES

TEST COMPOUND	38030572	88030573	98030574	88030575	98030576	38030577
9RCHCDICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOMETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	מא	ND	ND	ND	ND
CHLOROBENZENE	ND	D	ND	ND	ND	ND
CHLGROETHANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYLVINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	D	ND	ND
CHLOROHETHANE	D	ND	ND	ND	מא	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	MD	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLGROBENZENE	ND	NO	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	מא	ND	ND	ND	D	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLORGETHENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	D	מא	מא	ND	ND	UP
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	DR
TRANS-1,3-DICHLOROPROPENE	1.5	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	ND	ND	ND	סא	ND	ND
1,1,2,2-TETRACHLOROETHAME	ND	ND	ND	ND	ND	ND
TETRACHLORGETHENE	ND CN	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	60	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	6.5	0.7	ND	1.6	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

TASK: 4, UNITS: ug/L, GROUP 601

88030572

VF, ET-5, GW1, ES

	Analysis	Results
TEST COMPOUND	Col 1	Co1 2
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ИD
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROFORM	ND	ND
CHLOROMETHANE	ND	MD
DIBROMOCHLOROMETHANE	ND	ИD
1,2-DICHLOROBENZENE	ND	ND
1,3-dichlorobenzene	ND	ИD
1,4-dichlorobenzene	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHENE	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
CIS-1, 3-DICHLOROPROPENE	ND	ND
TRANS-1,3-DICHLOROPROPENE	1.5	5.0
METHYLENE CHLORIDE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHENE	ND	ND
1,1,1-TRICHLOROETHANE	60	26
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	6.5	5.2
TRICHLOROFLUOROMETHANE	ND	ND
VINYL CHLORIDE	ND	ND

TASK: 4, UNITS: ug/L, GROUP 601

88030573 VF,ET-4,GW1,ES

	Analysis Results		
TEST COMPOUND	Col 1	Co1 2	
		_	
BROMODICHLOROMETHANE	ND	ND	
BROMOFORM	ND	ND	
BROMOETHANE	ND	ND	
CARBON TETRACHLORIDE	ND	ND	
CHLOROBENZENE	ND	ND	
CHLOROETHANE	ND	ND	
2-CHLOROETHYL VINYL ETHER	ND	ND	
CHLOROFORM	ND	ND	
CHLOROMETHANE	ND	ND	
DIBROMOCHLOROMETHANE	ND	ND	
1,2-DICHLOROBENZENE	ND	ND	
1,3-DICHLOROBENZENE	ND	ND	
1,4-DICHLOROBENZENE	ND	ND	
DICHLORODIFLUOROMETHANE	ND	ND	
1,1-DICHLOROETHANE	· ND	ND	
1,2-DICHLOROETHANE	ND	ND	
1,1-DICHLOROETHENE	ND	ND	
TRANS-1, 2-DICHLOROETHENE	ND	ND	
1,2-DICHLOROPROPANE	ND	ND	
CIS-1,3-DICHLOROPROPENE	ND	ND	
TRANS-1,3-DICHLOROPROPENE	ND	ND	
METHYLENE CHLORIDE	ND	ND	
1,1,2,2-TETRACHLOROETHANE	ND	ND	
TETRACHLOROETHENE	0.7	0.7	
1,1,1-TRICHLOROETHANE	ND	ND	
1,1,2-TRICHLOROETHANE	ND	ND	
TRICHLOROETHENE	ND	ND	
TRICHLOROFLUOROMETHANE	ND	ND	
VINYL CHLORIDE	ND	ND	

TASK: 4, UNITS: ug/L, GROUP 601

88030575 VF, ET-7, GW1, ES

	Analysis Results		
TEST COMPOUND	Col 1	Col 2	
BROMODICHLOROMETHANE	ND	ND	
BROMOFORM	ND	ND	
BROMOETHANE	ND	ND	
CARBON TETRACHLORIDE	ND	ND	
CHLOROBENZENE	ND	ND	
CHLOROETHANE	ND	ND	
2-CHLOROETHYL VINYL ETHER	ND	ND	
CHLOROFORM	ИD	ND	
CHLOROMETHANE	ND	מא	
DIBROMOCHLOROMETHANE	ND	ND	
1,2-DICHLOROBENZENE	ND	ND	
1,3-DICHLOROBENZENE	ND	ND	
1,4-DICHLOROBENZENE	ND	ND	
DICHLORODIFLUOROMETHANE	ND	ND	
1.1-DICHLOROETHANE	ND	ND	
1,2-DICHLOROETHANE	ND	ND	
1.1-DICHLOROETHENE	ND	ND	
TRANS-1,2-DICHLOROETHENE	ND	ND	
1.2-DICHLOROPROPANE	ND	ND	
CIS-1.3-DICHLOROPROPENE	ND	ND	
TRANS-1.3-DICHLOROPROPENE	ND	ND	
METHYLENE CHLORIDE	ND	ND	
1.1.2.2-TETRACHLOROETHANE	ND	ND	
TETRACHLOROETHENE	ND	ND	
1.1.1-TRICHLOROETHANE	ND	ND	
1.1.2-TRICHLOROETHANE	ND	ND	
TRICHLOROETHENE	1.6	1.3	
TRICHLOROFLUOROMETHANE	ND	מא	
VINYL CHLORIDE	ND	ND	
ATHIN CHINKING	116	ND	

Detection Limits Purgeable Halocarbons EPA 601

Samples No.: 88030572 - 88030577

Compound	Detection Limits
Bromodichloromethane	0.10 ug/L
Bromoform	0.20
Bromomethane	1.18
Carbon tetrachloride	0.12
Chlorobenzene	0.25
Chloroethane	0.52
2-Chloroethyl vinyl ether	0.13
Chloroform	0.05
Chloromethane	0.08
Dibromochloromethane	0.09
1,2-Dichlorobenzene	0.18
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	1.81
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethene	0.13
trans-1,2-Dichloroethene	0.10
1,2-Dichloropropane	0.04
cis-1,3-Dichloropropene	0.20
trans-1,3-Dichloropropene	0.34
Methylene chloride	0.25
1,1,2,2-Tetrachloroethane	0.03
Tetrachloroethene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethene	0.12
Trichlorofluoromethane	0.50
Vinyl Chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, SROUP 601

	VF,2-#5,6#1,ES	VF,2-1,SW1,ES	vF,2-2,SW1,ES	VF,1-W3,6W1,ES	VF,10-W1,6W1,ES	VF,2-W3,6W1,ES
TEST COMPOUND	88030551	88030552	88030553	88030554	38030555	88030556
BRONODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
9RCMOFORM	ND	ND	ND	NO	NO	UP
SROMOMETHANE	ND	ND	ND	ND	ND	ND OF
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	D	ND
CHLOROETHANE	ND	OK	ФK	ND	ND	ND
2-CHLGROETHYLVINYL STHER	ND	ND	ND	ND	ND	ND
CHLOROFORM	D	פא	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOCHLGROMETHANE	Oν	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	מא	OP	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUCROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLORGETHANE	ND	D	ND	1.6	ND	ND
1,2-DICHLOROETHANE	ND	ND	סא	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	MD	ND	ND .
TRANS-1,2-DICHLOROETHENE	ND	ND	ND	4.5	ND	ND
1,2-DICHLGROPROPANE	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	ND	ND	ND	ND	XO	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLORDETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLORGETHENE	ND	ND	ND	13.1	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	D	ND	ND	ND
WINYL CHLORIDE	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP 601

VF,2-W4,6W1,ES VF,10-W2,SW1,ES VF,10-W3,6W1,ES VF,10-W5,5W1,ES VF,10-W4,GW1,ES VF,12-W2,SW1,ES

TEST COMPOUND	38030557	88030558	a8030559	88030560	88030561	88030562
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	
BROMOFORM	ND	ND	ND	ND	ND	4D
BROMOMETHANE	ND	HD	CF	ND	D	ND
CARBON TETRACHLORIDE	ND	סא	ND	מא	ND	ND
CHLOROBENZENE	מא	פא	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	OP
2-CHLOROETHYLVINYL ETHER	ND	٧D	ND	ND	ND	D
CHLOROFORM	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	MD
1,2-DICHLORGBENZENE	ND	ND	ND	ND	ND	ND
,3-DICHLOROBENZENE	ND	ND	NO	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUGROMETHANE	ND	ND	ND	מא	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLORDETHENE	ND	ND	ND	ND	ND	¥D
TRANS-1,2-DICHLOROETHENE	ND.	DM	ND	ND	ND	ND
1,2-DICHLOROPROPANE	NO	NO	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND.
TRANS-1,3-DICHLOROPROPENE	ND	ND	מא	ND	ND	ND
METHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLORGETHANE	ND	ND	ND	ND	ND	ND
FETRACHLORGETHENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
.,1,2-TRICHLOROETHANE	ND	ND	ND	NB	ND	ar
FRICHLOROETHENE	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP 601

VINYL CHLORIDE

	VF,11-W4,GW1,ES
TEST COMPOUND	88030563
650MOD (CHLOROMETHANE	ND
SAGMOFOAM	ND
GROMOMETHANE	ND
CARBON TETRACHLORIDE	ND
CHLOROBENZENE	ND
CHLORUETHANE	ND
Z-CHLOROETHYLVINYL ETHER	ND
CHLOROFORM	ND
DHI OR OMETHANE	ND
DIBROMOCHLOROMETHANE	ND
1,2-DICHLOROSENZENE	ND
1,3-DICHLOROBENZENE	ND
1,4-DICHLOROBENZENE	ND
DICHLORODIFLUOROMETHANE	ND
1,1-DICHLOROETHANE	ND
1,2-DICHLORGETHANE	ND
1,1-DICHLOROETHENE	ND
TRANS-1,2-DICHLOROETHENE	ΝD
1,2-DICHLBROPROPANE	ND
CIS-1,3-DICHLOROPROPENE	ND
TRANS-1,3-DICHLORCPROPENE	ND
METHYLENE CHLORIDE	ND
1,1,2,2-TETRACHLORGETHANE	ND
TETRACHLOROETHENE	ND
1,1,1-TRICHLORGETHANE	ND
1,1,2-TRICHLOROETHANE	ND
TRICHLOROETHENE	ND
TRICHLOROFLUOROMETHANE	ND

ND

TASK: 4, UNITS: ug/L, GROUP 601

88030554 VF,1-W3,GW1,ES

	Analysis Results		
TEST COMPOUND	Col 1	Co1 2	
BROMODICHLOROMETHANE	ND	ND	
BROMOFORM	ND	ND	
BROMOETHANE	ND	ND	
CARBON TETRACHLORIDE	ND	ND	
CHLOROBENZENE	ND	ND	
CHLOROETHANE	ND	ND	
2-CHLOROETHYL VINYL ETHER	ND	ND	
CHLOROFORM	ND	ND	
CHLOROMETHANE	ND	ND	
DIBROMOCHLOROMETHANE	ND	ND	
1,2-DICHLOROBENZENE	ND	ND	
1,3-dichlorobenzene	ND	ND	
1,4-DICHLOROBENZENE	ND	ND	
DICHLORODIFLUOROMETHANE	ND	ND	
1,1-DICHLOROETHANE	1.6	1.4	
1,2-DICHLOROETHANE	ND	ND	
1,1-DICHLOROETHENE	ND	ND	
TRANS-1, 2-DICHLOROETHENE	4.5	3.5	
1,2-DICHLOROPROPANE	ND	ND	
CIS-1,3-DICHLOROPROPENE	ND	ND	
TRANS-1, 3-DICHLOROPROPENE	ND	ND	
METHYLENE CHLORIDE	ND	ND	
1,1,2,2-TETRACHLOROETHANE	ND	ND	
TETRACHLOROETHENE	ND	ND	
1,1,1-TRICHLOROETHANE	ND	ND	
1.1.2-TRICHLOROETHANE	ND	ND	
TRICHLOROETHENE	13.1	17.3	
TRICHLOROFLUOROMETHANE	ND	ND	
VINYL CHLORIDE	ND	ND	

Detection Limits Purgeable Halocarbons EPA 601

Samples No.: 88030551 - 88030563

Compound	Detection	Limits
Bromodichloromethane	0.10	ug/L
Bromoform	0.20	_
Bromomethane	1.18	
Carbon tetrachloride	0.12	
Chlorobenzene	0.25	
Chloroethane	0.52	
2-Chloroethyl vinyl ether	0.13	
Chloroform	0.05	
Chloromethane	0.08	
Dibromochloromethane	0.09	
1,2-Dichlorobenzene	0.18	
1,3-Dichlorobenzene	0.32	
1,4-Dichlorobenzene	0.24	
Dichlorodifluoromethane	1.81	
1,1-Dichloroethane	0.07	
1,2-Dichloroethane	0.03	
1,1-Dichloroethene	0.13	
trans-1,2-Dichloroethene	0.10	
1,2-Dichloropropane	0.04	
cis-1,3-Dichloropropene	0.20	
trans-1,3-Dichloropropene	0.34	
Methylene chloride	0.25	
1,1,2,2-Tetrachloroethane	0.03	
Tetrachloroethene	0.03	
1,1,1-Trichloroethane	0.03	
1,1,2-Trichloroethane	0.02	
Trichloroethene	0.12	
Trichlorofluoromethane	0.50	
Vinyl Chloride	0.18	

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 536

TASK: 4, UNITS: ug/L, SROUP 601

VF,12-#3,GW1,ES VF,1-#2,GW1,ES VF,ET-1,GW1,ES VF,ET-2,GW1,ES VF,ET-3,GW1,ES VF,11-#5,GW1,ES

TEST COMPOUND	88030565	88030566	88030567	88030568	88030569	38030570
3ROMODICHLOROMETHANE	ND	ND	ND	ND	ND	סא
3RONOFORM	ND	ND	ND	ND	ND	d.
BROMOMETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
CHLORGETHANE	ND	ND	ND	ND	ND	ND
2-CHLORGETHYLVINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	D
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLGROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHAME	ND	ND	ND	MD	12	ND
1,2-DICHLORGETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLORGETHENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	10	ND
METHYLENE CHLORIDE	ND	ND	ND	ND	פא	OP
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	D	ND	ND	ND	DM
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORGETHANE	ND	DM	ND	ND	ND	ND
TRICHLORGETHENE	ND	0.9	ND	ND	79	ND
TRICHLOROFLUOROMETHANE	ND	MD	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

TASK: 4, UNITS: ug/L, GROUP 601

88030566

VF, 1-W2, GW1, ES

	Analysis Results		
TEST COMPOUND	Col 1	Col 2	
BROMODICHLOROMETHANE	ND	NTD	
BROMOFORM	ND	ND	
BROMOETHANE	ND	ND	
CARBON TETRACHLORIDE	ND	ND	
CHLOROBENZENE	ND	ND	
CHLOROETHANE	ND	ND	
2-CHLOROETHYL VINYL ETHER	ND	ND	
CHLOROFORM	ND	ND	
CHLOROMETHANE	ND	ND	
DI BROMOCHLOROMETHANE	ND	ND	
1.2-DICHLOROBENZENE	ND	ND	
1.3-DICHLOROBENZENE	ND	ND	
1,4-DICHLOROBENZENE	ND	ND	
DICHLORODIFLUOROMETHANE	ND	ND	
1.1-DICHLOROETHANE	ND	ND	
1.2-DICHLOROETHANE	ND	ND	
1.1-DICHLOROETHENE	ND	ND	
TRANS-1, 2-DICHLOROETHENE	ND	ND	
1,2-DICHLOROPROPANE	ND	ND	
CIS-1,3-DICHLOROPROPENE	ND	ND	
TRANS-1,3-DICHLOROPROPENE	ND	ND	
METHYLENE CHLORIDE	ND	ND	
1,1,2,2-TETRACHLOROETHANE	ND	ND	
TETRACHLOROETHENE	ND	ND	
1,1,1-TRICHLOROETHANE	ND	ND	
1,1,2-TRICHLOROETHANE	ND	ND	
TRICHLOROETHENE	0.9	1.2	
TRICHLOROFLUOROMETHANE	ND	ND	
VINYL CHLORIDE	ND	ND	

TASK: 4, UNITS: ug/L, GROUP 601

88030569

VF, ET-3, GW1, ES

TEST COMPOUND Col 1 BROMODICHLOROMETHANE ND	ND ND
BROMODICHLOROMETHANE ND	
BROMODICHLOROMETHANE ND	
	ND
BROMOFORM	
BROMOETHANE	ND
CARBON TETRACHLORIDE ND	ND
CHLOROBENZENE ND	ND
CHLOROETHANE ND	ND
2-CHLOROETHYL VINYL ETHER ND	ND
CHLOROFORM	ND
CHLOROMETHANE	ND
DI BROMOCHLOROMETHANE ND	ND
1,2-DICHLOROBENZENE ND	ND
1,3-DICHLOROBENZENE ND	ND
1,4-DICHLOROBENZENE ND	ND
DICHLORODIFLUOROMETHANE ND	ND
1,1-DICHLOROETHANE 12	3.3
1,2-DICHLOROETHANE ND	ND
1,1-DICHLOROETHENE ND	ND
TRANS-1, 2-DICHLOROETHENE ND	ND
1,2-DICHLOROPROPANE ND	ND
CIS-1,3-DICHLOROPROPENE ND	ND
TRANS-1,3-DICHLOROPROPENE 10	2.0
METHYLENE CHLORIDE ND	ND
1,1,2,2-TETRACHLOROETHANE ND	ND
TETRACHLOROETHENE ND	ND
1,1,1-TRICHLOROETHANE ND	ND
1,1,2-TRICHLOROETHANE ND	ND
TRICHLOROETHENE 79	42
TRICHLOROFLUOROMETHANE ND	ND
VINYL CHLORIDE ND	ND

Detection Limits Purgeable Halocarbons EPA 601

Samples No.: 88030565 - 88030570

Compound	Detection Limits
Bromodichloromethane	0.10 ug/L
Bromoform	0.20
Bromomethane	1.18
Carbon tetrachloride	0.12
Chlorobenzene	0.25
Chloroethane	0.52
2-Chloroethyl vinyl ether	0.13
Chloroform	0.05
Chloromethane	0.08
Dibromochloromethane	0.09
1,2-Dichlorobenzene	0.18
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	1.81
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethene	0.13
trans-1,2-Dichloroethene	0.10
1,2-Dichloropropane	0.04
cis-1,3-Dichloropropene	0.20
trans-1,3-Dichloropropene	0.34
Methylene chloride	0.25
1,1,2,2-Tetrachloroethane	0.03
Tetrachloroethene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethene	0.12
Trichlorofluoromethane	0.50
Vinyl Chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT

WORK ORDER NUMBER: 732

JOB NUMBER : ZB0000000400

WORK ORDER DATE : 07/08/88

APPROVED BY _

Lab Supervisor

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGB

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

DAN LANE

CONTACT

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

: DAN LANE

(404)-325-0770

TASK: 4, UNITS: ug/L, GROUP 601

TEST COMPOUND	VF 950 GW-1 ES 7-7-88 1140 88071335	TRIP BLANK 7-7-88 1203 88071336	UF 934 GW-1 ES 7-7-88 1215 88071337	VF 916 GW-1 ES 7-7-88 1250 88071338
BROMODICHLOROMETHANE	ND	ND	HD	ND
BROMOFORM	ND	ND	ND	ND
BROMOMETHANE	MD	MD	ND	MD
CARBON TETRACHLORIDE	NO	ND	ND	ND
CHLOROBENZENE	ND	HD	ND	NO
CHLOROETHANE	ND	NO	MD	HD
2-CHLOROETHYLVINYL ETHER	MD	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND
CHLOROMETHANE	ND	MO	ND	HD
DIBROMOCHLOROMETHANE	MD	ND	ND	HD
1,2-DICHLOROBENZENE	MD	ND	HD	ND
1,3-DICHLOROBENZENE	HD	NO	ND	HO
1,4-DICHLOROBENZENE	MD	MO	MD	NB
DICHLORODIFLUOROMETHANE	MD	MD	NO	HD
1,1-DICHLOROETHAME	MD	MD	MO	MD
1,2-DICHLOROETHANE	MD	MO	ND	HD
1,1-OICHLOROETHENE	MO	MD	MD	MO
TRANS-1,2-DICHLOROETHENE	MD	MD	NO	HD
1,2-DICHLOROPROPANE	MD	MD	MD	NO
CIS-1,3-DICHLOROPROPENE	MD	MÐ	HD	HD
TRAMS-1,3-DICHLOROPROPENE	MD	MO	ND	MD
METHYLENE CHLORIDE	1.5B	5 . 6B	1.9B	1.7B
1,1,2,2-TETRACHLOROETHANE	MD	MD	MO	HD
TETRACHLOROETHENE	MD	MO	MO	HD
1,1,1-TRICHLOROETHAME	HO	MD	MD	MD
1,1,2-TRICHLOROETHAME	MO	ND	ND	ND
TRICHLOROETHENE	MO	MD	NO	HD
TRICHLOROFLUOROMETHANE	MO	ND	ND	MD
VINYL CHLORIDE	NO	ND	HO	MD

LEGEND FOR ORGANIC RESULT QUALIFIERS

- U The compound was analyzed for but not detected.
- J The value reported is an estimated concentration. This is used when the compound is detected at an amount less than the quantitation limit.
- C This is used for pesticide results where identification has been confirmed by GC/MS.
- B The analyte is found in the associated blank as well as in the sample.
- A TIC is a suspected aldol-condensation product.

DETECTION LIMITS PURGEABLE HALOCARBONS EPA METHOD 601

SAMPLES NO.: 88071335-88071338

Bromoform 0.20 ug/L Bromomethane 1.2 ug/L Carbon Tetrachloride 0.12 ug/L Chlorobenzene 0.25 ug/L Chloroethane 0.52 ug/L 2-Chloroethyl vinyl ether 0.13 ug/L Chloroform 0.05 ug/L Chloromethane 0.08 ug/L Dibromochloromethane 0.09 ug/L 1,2-Dichlorobenzene 0.15 ug/L 1,3-Dichlorobenzene 0.24 ug/L 1,4-Dichloroethane 0.07 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.03 ug/L 1,2-Dichloroethene 0.03 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.04 ug/L trans-1,3-Dichloropropene 0.03 ug/L Methylene chloride 0.03 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.02 ug/L Trichloroethene 0.02 ug/L <th>Compound</th> <th>Detection</th> <th>Limits</th>	Compound	Detection	Limits
Bromomethane	Bromodichloromethane	0.10	ug/L
Carbon Tetrachloride 0.12 ug/L Chlorobenzene 0.25 ug/L Chloroethane 0.52 ug/L 2-Chloroethyl vinyl ether 0.13 ug/L Chloromethane 0.05 ug/L Chloromethane 0.08 ug/L Dibromochloromethane 0.09 ug/L 1,2-Dichlorobenzene 0.15 ug/L 1,3-Dichlorobenzene 0.24 ug/L 1,4-Dichlorobenzene 0.24 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.13 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.04 ug/L trans1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.03 ug/L Trichloroethene 0.12 ug/L Trichloroethene 0.12 ug/L Trichloroethene 0.12 ug/L Trichloroethene 0.12 ug/L Trichloroethene 0.50 ug/L Trichlorofluoromethane 0.50 ug/L <td>Bromoform</td> <td>0.20</td> <td>ug/L</td>	Bromoform	0.20	ug/L
Chlorobenzene 0.25 ug/L Chloroethane 0.52 ug/L 2-Chloroethyl vinyl ether 0.13 ug/L Chloroform 0.05 ug/L Chloromethane 0.08 ug/L Dibromochloromethane 0.09 ug/L 1,2-Dichlorobenzene 0.15 ug/L 1,3-Dichlorobenzene 0.32 ug/L 1,4-Dichlorobenzene 0.24 ug/L Dichlorodifluoromethane 1.81 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.03 ug/L 1,1-Dichloroethene 0.13 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.04 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L Tetrachloroethene 0.03 ug/L 1,1,2-Trichloroethane 0.03 ug/L Trichloroethene 0.12 ug/L Trichloroethene 0.12 ug/L Trichloroethene 0.12 ug/L Trichloroethene 0.50 ug/L	Bromomethane	1.2	ug/L
Chloroethane 0.52 ug/L 2-Chloroethyl vinyl ether 0.13 ug/L Chloroform 0.05 ug/L Chloromethane 0.08 ug/L Dibromochloromethane 0.09 ug/L 1,2-Dichlorobenzene 0.15 ug/L 1,3-Dichlorobenzene 0.24 ug/L 1,4-Dichlorobenzene 0.24 ug/L Dichlorodifluoromethane 1.81 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.13 ug/L 1,1-Dichloroethene 0.13 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.04 ug/L cis-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.02 ug/L Trichloroethene 0.02 ug/L Trichlorofluoromethane 0.50 ug/L	Carbon Tetrachloride	0.12	ug/L
2-Chloroethyl vinyl ether 0.13 ug/L Chloroform 0.05 ug/L Chloromethane 0.08 ug/L Dibromochloromethane 0.09 ug/L 1,2-Dichlorobenzene 0.15 ug/L 1,3-Dichlorobenzene 0.32 ug/L 1,4-Dichlorobenzene 0.24 ug/L Dichlorodifluoromethane 1.81 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.03 ug/L 1,1-Dichloroethene 0.10 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.04 ug/L cis-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	Chlorobenzene	0.25	ug/L
Chloroform 0.05 ug/L Chloromethane 0.08 ug/L Dibromochloromethane 0.09 ug/L 1,2-Dichlorobenzene 0.15 ug/L 1,3-Dichlorobenzene 0.32 ug/L 1,4-Dichlorobenzene 0.24 ug/L Dichlorodifluoromethane 1.81 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.03 ug/L 1,1-Dichloroethene 0.13 ug/L trans-1,2-Dichloroethene 0.10 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.24 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2-Z-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	Chloroethane	0.52	ug/L
Chloromethane 0.08 ug/L Dibromochloromethane 0.09 ug/L 1,2-Dichlorobenzene 0.15 ug/L 1,3-Dichlorobenzene 0.32 ug/L 1,4-Dichlorobenzene 0.24 ug/L Dichlorodifluoromethane 1.81 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.03 ug/L 1,1-Dichloroethene 0.13 ug/L trans-1,2-Dichloroethene 0.10 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.24 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2-Z-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	2-Chloroethyl vinyl ether	0.13	ug/L
Dibromochloromethane 0.09 ug/L 1,2-Dichlorobenzene 0.15 ug/L 1,3-Dichlorobenzene 0.32 ug/L 1,4-Dichlorobenzene 0.24 ug/L Dichlorodifluoromethane 1.81 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.03 ug/L 1,1-Dichloroethene 0.10 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.20 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	Chloroform	0.05	ug/L
1,2-Dichlorobenzene 0.15 ug/L 1,3-Dichlorobenzene 0.32 ug/L 1,4-Dichlorobenzene 0.24 ug/L Dichlorodifluoromethane 1.81 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.03 ug/L 1,1-Dichloroethene 0.10 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.20 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	Chloromethane	0.08	ug/L
1,3-Dichlorobenzene 0.32 ug/L 1,4-Dichlorobenzene 0.24 ug/L Dichlorodifluoromethane 1.81 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.13 ug/L trans-1,2-Dichloroethene 0.10 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.20 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	Dibromochloromethane	0.09	ug/L
1,4-Dichlorobenzene 0.24 ug/L Dichlorodifluoromethane 1.81 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.13 ug/L trans-1,2-Dichloroethene 0.10 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.20 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	1,2-Dichlorobenzene	0.15	ug/L
Dichlorodifluoromethane 1.81 ug/L 1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.03 ug/L 1,1-Dichloroethane 0.13 ug/L trans-1,2-Dichloroethane 0.04 ug/L cis-1,3-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.20 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethane 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	1,3-Dichlorobenzene	0.32	ug/L
1,1-Dichloroethane 0.07 ug/L 1,2-Dichloroethane 0.03 ug/L 1,1-Dichloroethene 0.13 ug/L trans-1,2-Dichloroethene 0.10 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.20 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	1,4-Dichlorobenzene	0.24	ug/L
1,2-Dichloroethane 0.03 ug/L 1,1-Dichloroethene 0.13 ug/L trans-1,2-Dichloroethene 0.10 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.20 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	Dichlorodifluoromethane	1.81	ug/L
1,1-Dichloroethene 0.13 ug/L trans-1,2-Dichloroethene 0.10 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.20 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	1,1-Dichloroethane	0.07	ug/L
trans-1,2-Dichloroethene 0.10 ug/L 1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.20 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L Tetrachloroethene 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	1,2-Dichloroethane	0.03	ug/L
1,2-Dichloropropane 0.04 ug/L cis-1,3-Dichloropropene 0.20 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2.2-Tetrachloroethane 0.03 ug/L Tetrachloroethene 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	1,1-Dichloroethene	0.13	ug/L
cis-1,3-Dichloropropene 0.20 ug/L trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L Tetrachloroethene 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	trans-1,2-Dichloroethene	0.10	ug/L
trans-1,3-Dichloropropene 0.34 ug/L Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L Tetrachloroethene 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	1,2-Dichloropropane	0.04	ug/L
Methylene chloride 0.25 ug/L 1,1,2,2-Tetrachloroethane 0.03 ug/L Tetrachloroethene 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	cis-1,3-Dichloropropene	0.20	ug/L
1,1,2,2-Tetrachloroethane0.03 ug/LTetrachloroethene0.03 ug/L1,1,1-Trichloroethane0.03 ug/L1,1,2-Trichloroethane0.02 ug/LTrichloroethene0.12 ug/LTrichlorofluoromethane0.50 ug/L	trans-1,3-Dichloropropene	0.34	ug/L
Tetrachloroethene 0.03 ug/L 1,1,1-Trichloroethane 0.03 ug/L 1,1,2-Trichloroethane 0.02 ug/L Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	Methylene chloride	0.25	ug/L
1.1.1-Trichloroethane0.03 ug/L1.1.2-Trichloroethane0.02 ug/LTrichloroethene0.12 ug/LTrichlorofluoromethane0.50 ug/L	1,1,2,2-Tetrachloroethane	0.03	ug/L
1,1,2-Trichloroethane0.02 ug/LTrichloroethene0.12 ug/LTrichlorofluoromethane0.50 ug/L	Tetrachloroethene	0.03	ug/L
Trichloroethene 0.12 ug/L Trichlorofluoromethane 0.50 ug/L	1,1,1-Trichloroethane	0.03	ug/L
Trichlorofluoromethane 0.50 ug/L	1,1,2-Trichloroethane	0.02	ug/L
-	Trichloroethene	0.12	ug/L
Vinyl Chloride 0.18 ug/L	Trichlorofluoromethane	0.50	ug/L
	Vinyl Chloride	0.18	ug/L

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

TASK: 4, UNITS: ug/L, GROUP 601

Sample No.: 88071335

	Analysis Results	
TEST COMPOUND	Col 1 Col 2	
Bromodichloromethane	ND ND	
Bromoform	ND ND	
Bromomethane	ND ND	
Carbon tetrachloride	ND ND	
Chlorobenzene	ND ND	
Chloroethane	ND ND	
2-Chloroethyl vinyl ether	ND ND	
Chloroform	ND ND	
Chloromethane	ND ND	
Dibromochloromethane	ND ND	
1,2-Dichlorobenzene	ND ND	
1,3-Dichlorobenzene	ND ND	
1.4-Dichlorobenzene	ND ND	
Dichlorodifluoromethane	ND ND	
1.1-Dichloroethane	ND ND	
1,2-Dichloroethane	ND ND	
1,1-Dichloroethene	ND ND	
trans-1,2-Dichloroethene	ND ND	
1,2-Dichloropropane	ND ND	
cis-1,3-Dichloropropene	ND ND	
trans-1,3-Dichloropropene	ND ND	
Methylene chloride	1.5B 0.25B	
1,1,2,2-Tetrachloroethane	ND ND	
Tetrachloroethane	ND ND	
1,1,1-Trichloroethane	ND ND	
1,1,2-Trichloroethane	ND ND	
Trichloroethene	ND ND	
Thrichlorofluoromethane	ND ND	
Vinyl chloride	ND ND	

TASK: 4, UNITS: ug/L, GROUP 601

Sample No.: 88071336

	Analysis	Results
TEST COMPOUND	Col 1	Col 2
Bromodichloromethane	ND	ND
Bromoform	ND	ND
Bromomethane	ND	ND
Carbon tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
2-Chloroethyl vinyl ether	ND	ND
Chloroform ·	ND	ND
Chloromethane	ND	ND
Dibromochloromethane	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Dichlorodifluoromethane	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane	ND	ND
1,1-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	· ND
trans-1,3-Dichloropropene	ND	ND
Methylene chloride	5.6B	1.2B
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachloroethane	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Thrichlorofluoromethane	ND	ND
Vinyl chloride	ND	ND

TASK: 4, UNITS: ug/L, GROUP 601

Sample No.: 88071337

	Analysis	Results
TEST COMPOUND	© 1 1	©1 2
Bromodichloromethane	ND	ND
Bromoform	ND	ND
Bromomethane	ND	ND
Carbon tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
2-Chloroethyl vinyl ether	ND	ND
Chloroform	ND	ND
Chloromethane	ND	ND
Dibromochloromethane	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Dichlorodifluoromethane	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane	ND	ND
1,1-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Methylene chloride	1.9B	0.29B
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachloroethane	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Thrichlorofluoromethane	ND	ND
Vinyl chloride	ND	ND

TASK: 4, UNITS: ug/L, GROUP 601

Sample No.:

88071338

	Analysis	Analysis Results		
TEST COMPOUND	Col 1	©1 2		
Bromodichloromethane	ND	ND		
Bromoform	ND	ND		
Bromomethane	ND	ND		
Carbon tetrachloride	ND	ND		
Chlorobenzene	ND	ND		
Chloroethane	ND	ND		
2-Chloroethyl vinyl ether	ND .	ND		
Chloroform	ND .	ND		
Chloromethane	ND	ND		
Dibromochloromethane	ND	ND		
1.2-Dichlorobenzene	ND	ND		
1.3-Dichlorobenzene	ND	ND		
1.4-Dichlorobenzene	ND	ND		
Dichlorodifluoromethane	ND	ND		
1.1-Dichloroethane	ND	ND		
1.2-Dichloroethane	ND	ND		
1.1-Dichloroethene	ND	ND		
trans-1,2-Dichloroethene	ND	ND		
1,2-Dichloropropane	ND	ND		
cis-1,3-Dichloropropene	ND	ND		
trans-1,3-Dichloropropene	ND	ND		
Methylene chloride	1.7B	0.89B		
1,1,2,2-Tetrachloroethane	ND	ND		
Tetrachloroethane	ND	ND		
1,1,1-Trichloroethane	ND	ND		
1,1,2-Trichloroethane	ND	ND		
Trichloroethene	ND	ND		
Thrichlorofluoromethane	ND	ND		
Vinyl chloride	ND	ND		

ANALYTICAL RESULTS FOR AROMATIC VOLATILE ORGANICS

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/K6, SROUP 8020

TEST COMPOUND	VF1,8-3,55-3, 8.5' 38010186	VF1,8-21,SS-1, 1.0' 88010187	VF1,8-22,SS-1, 0.5' 88010188	VF1,B-4,SS-1, 0.5' 88010189 .	VF1,B-1,SS-1, 0.5' 98010190	VF1,8-1,3S-2, 3.5' 38010191
BENZENE	ND		170	2,000	16,000	6,500
CHLOROBENZENE	4D	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	DM	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
.,4-DICHLOROBENZENE	ND	ND	ND	NO	ND	ND
ETHYL BENZENE	ND	ND	1,100	4,800	17,000	5,300
TOLUENE	ND OF	ND	1,000	2,500	3,600	2,000
TYLENES	ND	ND	15,000	9,800	83,000	31,000

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/K6, SROUP 8020

TEST COMPOUND	VF1,8-1,SS-3, 3.5' 88010192	VF1,B-2,SS-1, 0.5' 98010193	VF1,8-2,SS-2, 3.5' 88010194	VF1,8-2,SS-3, 8.5' 88010195	VF1,8-3,SS-1, 1.0' 98010196	VF1,3-3,SS-2, 3.5' 88010197
9ENZENE.	19,000	ND	ND	ND	ND	ND
CHLGROBENZENE	ND	ND	ND	ND	HD	ND
1,2-DICHLOROBENZENE	ND	ND	VD	ND	ND	ND
1,3-010HLGROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	Or
ETHYL BENZENE	15,000	ND	ND	ND	ND	ND
TOLUENE	5,700	ND	ND	ND	ND	ND
XYLENES	60,000	ND	ND	ND	ND	D

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 8020

TOOT COMECUND	VF1,8-4,SS-2, 3.5'	VF1,8-4,SS-3, 8.5'
TEST COMPOUND	38010198	88010199
BENZENE	ND	41
CHLOROBENZENE	ND	ND
1,Z-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	ND	110
TOLUENE	ND	51
KYLENES	ND	190

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010188

VF1,B-22,SS-1,0.5

	Analy:is Results		
TEST COMPOUND	Col 1	Co1 2	
BENZENE	170	220	
CHLOROBENZENE	ND	ND	
1,2-DICHLOROBENZENE	ND	ND	
1,3-DICHLOROBENZENE	ND	ND	
1,4-DICHLOROBENZENE	ND	ND	
ETHYL BENZENE	1,100	2,000	
TOLUENE	1,000	1,000	
XYLENES	15,000	12,000	

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010189

VF1,B-4,SS-1,0.5'

	Analysis Results		
TEST COMPOUND	Col 1	Co1 2	
BENZENE	2,000	1,700	
CHLOROBENZENE	ND	ND	
1,2-dichlorobenzene	ND	ND	
1,3-dichlorobenzene	ND	ND	
1,4-DICHLOROBENZENE	ND	ND	
ETHYL BENZENE	4,800	970	
TOLUENE	2,500	1,600	
XYLENES	9.800	8.500	

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010190

VF1,B-1,SS-1,0.5'

	Analysi	s Results
TEST COMPOUND	Col 1	Col 2
BENZENE	16,000	14,000
CHLOROBENZENE	ND	ИD
1,2-dichlorobenzene	ND	ND
1,3-dichlorobenzene	מא	ND
1,4-dichlorobenzene	ND	ND
ethyl benzene	17,000	6,000
TOLUENE	3,600	6,500
XYLENES	83,000	45.000

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010191

VF1,B-1,SS-2,3.5'

	Analysis Results		
TEST COMPOUND	Col 1	Col 2	
BENZENE	6,500	7,300	
CHLOROBENZENE	ND	ND	
1,2-DICHLOROBENZENE	מא	ND	
1,3-DICHLOROBENZENE	ИD	ND	
1,4-DICHLOROBENZENE	ND	ND	
ETHYL BENZENE	6,300	1,600	
TOLUENE	2,000	3,200	
XYLENES	31,000	33,000	

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010192

VF1,B-1,SS-3,8.5'

	Analysis Results		
TEST COMPOUND	Col 1	Col 2	
BENZENE	19,000	14,000	
CHLOROBENZENE	ND	ND	
1,2-dichlorobenzene	ND	ND	
1,3-DICHLOROBENZENE	ND	ND	
1,4-dichlorobenzene	ND	ND	
ETHYL BENZENE	15,000	5,200	
TOLUENE	5,700	6,200	
XYLENES	60,000	32,000	

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010199

VF1,B-4,SS-3,8.5'

	Analysis Results		
TEST COMPOUND	Col 1	Col 2	
BENZENE	41	75	
CHLOROBENZENE	ND	ND	
1,2-dichlorobenzene	ND	МD	
1,3-DICHLOROBENZENE	ND	ND	
1,4-dichlorobenzene	ND	МD	
ETHYL BENZENE	110	110	
TOLUENE	51	91	
XYLENES	190	440	

Detection Limits Aromatic Volatile Organics EPA Method 8020

Samples No.: 88010186 - 88010199

Compound	Detection Limits
Benzene	0.2 ug/Kg
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/K6, SROUP 8020

	VF1,B-7,S\$-3, 9.5'	VF1,8-6,55-2, 3.5'	VF1,8-6,5S-3, 8.5'	VF1,B-7,SS-1, 0'	∀F1,8-7,9S-2, 3.5′	VF1,8-5,SS-1,0*
TEST COMPOUND	98010204	98010205	88010206	88010207	38010208	88010209
BENZENE	ND	1,200	970	ND	ND	ND OF
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLORGBENZENE	ND	מא	DM	ND	CP	MD
1,3-DICHLOROBENZENE	D	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	MD	GP
ETHYL BENZENE	ND	5,000	3,500	ND	ND	ND
TOLUENE	QV	2,600	1,800	ND	ND	ND
TYLENES	ND	25,000	34,000	מא	ND	ND

843**E** 5

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/KG, GROUP 8020

TEST COMPOUND	VF1,8-3,8S-2, 3.5′ 88010210	VF1,8-5,SS-3, 10.07 98010211	VF1,8-6,53-1, 0' 98010212
BENZENE	ND	110	120
CHLOROBENZENE	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND
1.3-DICHLOROBENZENE	ND	ND	ND
1,4-DICHLORGBENZENE	מא	ND	ND
ETHYL BENZENE	ND	360	370
TOLUENE	ND	500	800
XYLENES	ND	880	2,200

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010205

VF1, B-6, SS-2, 3.5'

	Analy	sis Results
TEST COMPOUND	Col 1	Col 2
BENZENE	1200	1600
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	6000	9000
TOLUENE	2600	9200
XYLENES	25,000	29,000

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010206

VF1, B-6, SS-3, 8.5'

	Analy	Analysis Results			
TEST COMPOUND	Col 1	Co1 2			
BENZENE	970	720			
CHLOROBENZENE	ИD	ND			
1,2-dichlorobenzene	ND	ND			
1,3-dichlorobenzene	ND	ND			
1,4-dichlorobenzene	ND	ND			
ethyl benzene	8500	6700			
TOLUENE	1800	1300			
XYLENES	84,000	82,000			

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010211

VF1, B-5, SS-3, 10.0

	Analysi	Analysis Results			
TEST COMPOUND	Col 1	Col 2			
BENZENE	110	110			
CHLOROBENZENE	מא	ИD			
1,2-DICHLOROBENZENE	ND	ND			
1,3-dichlorobenzene	иD	ND			
1,4-dichlorobenzene	ND	ND			
ETHYL BENZENE	360	300			
TOLUENE	500	840			
XYLENES	880	530			

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010212

VF1, B-6, SS-1, 0'

	Analys:	Analysis Results			
TEST COMPOUND	Col 1	Col 2			
BENZENE	120	160			
CHLOROBENZENE	No	ND			
1,2-DICHLOROBENZENE	ND	ND			
1,3-dichlorobenzene	ND	ND			
1,4-DICHLOROBENZENE	NTD	ND			
ETHYL BENZENE	370	420			
TOLUENE	800	820			
XYLENES	2200	2000			

Detection Limits Aromatic Volatile Organics EPA Method 8020

Sample(s) No.: 88010204-88010212

Compound	Detection Limits
	•
Benzene	0.2 ug/Kg
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 4, UNITS: ug/K6, GROUP 8020

TEST COMPOUND	VF1,8-26,SS-1, 0' 88010214	VF1,8-9,SS-2, 3.5' 88010215	VF1,8-9,SS-3, 8.5' 88010216	VF1,8-8,SS-1, 0' 38010217 .	VF1,8-8,SS-2, 3.5' 88010218	VF1,8-8,SS-3, 8.5' 88010219
BENZENE	ND	ND	ND D	ND	ND	מא
CHLOROBENZENE	D	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	OP
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	YD	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	ND	ND	ND
TOLUENE	ND	ND	ND	ND	ND	ND
XYLENES	. 40	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 4, UNITS: ug/KG, GROUP 8020

	VF1,B-9,SS-1, O'
TEST COMPOUND	88010220
BENZENE	ND
CHLOROBENZENE	ND
1,2-DICHLOROSENZENE	ND
1,3-DICHLOROBENZENE	ND
1,4-DICHLOROBENZENE	ND
ETHYL BENZENE	ND
TOLUENE	ND
XYLENES	ND

Detection Limits Arcmatic Volatile Organics EPA Method 8020

Sample(s) No.: 88010214-88010220

Compound	Detection Limits
Benzene	0.2 ug/Kg
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/K6, GROUP 8020

FEST COMPOUND	VF1,B-10,SS-1, 0.5' 88020289	VF1,B-27,SS-1, 0.5' 88020290	VF1,B-10,SS-2, 3.5' 88020291	VF1,B-10,SS-3, 8.5' 88020292	VF1,8-11,SS-1, 1.0' 88020293	VF1,B-11,SS-2 3.5' 58020294
BENZENE	ND	ND	ND	NO	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	NO	ND	ND	ND
1,3-DICHLORGBENZENE	ND	D	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	D	ND	ND.
TOLUENE	ND	ND	ND	ND	ND	ND
XYLENES	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK DEDER NUMBER 489

TASK: 4, UNITS: ug/K6, GROUP 8020

TEST COMPOUND	VF1,B-11,SS-3, 8.5' 88020295	VF1,B-12,SS-1 1.0' 88020296	VF1,8-12,SS-2, 3.5' 88020297	VF1,B-12,SS-3, 8.5' 88020298	VF1,B-13,SS-1, 1.5' 88020299	√F1,8-28,55-1, 1.5' 38020300
BENZENE	15,000	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	VD
1,3-DICHLUROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	40,000	ND	ND	ND	ND	ND
TOLUENE	37,000	D	ND	ND	ND	GM
XYLENES	98,000	ND	ND	ND	ND	ND

TASK: 4, UNITS: ug/Kg, GROUP 8020

88020295

VF1, B-11, SS-3, 8.5

	Analy	sis Results
TEST COMPOUND	Col 1	Co1 2
BENZENE	15,000	15,000
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	40,000	31,000
TOLUENE	37,000	17,000
XYLENES	88,000	146,000

Detection Limits Aromatic Volatile Organics EPA Method 8020

Sample(s) No.: 88020289-88020300

Compound	Detection Limits
Bandona	0.0
Benzene	0.2 ug/Kg
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 4, UNITS: ug/KG, GROUP 8020

TEST COMPOUND	VF1,8-14,55-3, 8.5' 88020371	VF1,8-15,SS-1, 0.5' 88020372	VF1,B-15,SS-2, 3.5' 88020373	VF1,8-15,SS-3, 8.5' 88020374	VF1,B-13,SS-2, 3.5' 88020375	VF1,B-13,SS-3, 9.5' 98020376
BENZENE	ND	ND	ND	ND	ND	AD
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	D	ND	ND	ND
1,3-DICHLOROBENZENE	סא	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	D	ND	ND
TOLUENE	ND	ND	ND	ND	ND	ND
XYLENES	ND	ND	ND	ND	D	ND

P46E 7

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 4, UNITS: ug/KG, GROUP 3020

TEST COMPOUND	VF1,B-14,SS-1, 1.0' 88020377	VF1,B-14,SS-2, 3.5' 88020378
BENZENE	ND	ND
CHLORGBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
i,3-01CHLOROBENZENE	ПM	ND
1,4-DICHLORGBENZENE	ND	ND
ETHYL BENZENE	ND	ND
TOLUENE	ND	ND
XYLENES	ND	ND

Detection Limits Aromatic Volatile Organics EPA Method 8020

Samples No.: 88020371 - 83020378

Compound	Detection Limits
Benzene	0.2 ug/Kg
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

ANALYSIS REPORT FOR WORK ORDER NUMBER 530

TASK: 4, UNITS: ug/L, GROUP 8020

	VF,2-W1,5W1,ES	VF,1-W4,8W1,E5	VF,1-W5,6W1,ES	VF,2-W2,5W1,ES	VF,1-W1,8W1,ES	
TEST COMPOUND	88030536	98030537	38030538	38030539	88030540	ES 88030541
BENZENE	ND	450	4,5	ND	4.9	1.5
CHEGROBENZENE	40	ND	ND	ND	ND	40
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
:,3-DICHLGROBENZENE	VD.	ND	ND	ND	ND	UP
:,4-DICHLOROBENZENE	ND	ND	ND	ND	ND OF	ND
ETHYL BENZENE	ND	51	ND	ND	ND	ND
TOLUENE	ND	10.8	ND	ND	0.44	1.6
XYLENES	ND	:07	4.7	ND	4.0	29.9

ANALYSIS REPORT FOR WORK ORDER NUMBER 530

TASK: 4, UNITS: ug/L, GROUP 8020

	VF,11-W3,GW1,ES
TEST COMPOUND	88030542
BENZENE CHLOROBENZENE 1,2-DICHLOROBENZENE 1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE ETHYL BENZENE TOLUENE XYLENES	02 02 02 03 04 04 05 05 05 05 05 05 05 05 05 05 05 05 05

TASK: 4, UNITS: ug/L, GROUP 8020

88030537

VF, 1-W4, GW1, ES

	Analysis Results		
TEST COMPOUND	Col 1	Col 2	
BENZENE	450	360	
CHLOROBENZENE	ND	ND	
1,2-dichlorobenzene	ND	ND	
1,3-dichlorobenzene	DM	ND	
,4-dichlorobenzene	סמ	ND	
ETHYL BENZENE	51	53	
oluene	10.8	6.8	
xylenes	107	78	

TASK: 4, UNITS: ug/L, GROUP 8020

88030538

VF, 1-W5, GW1, ES

	Analysis	Results
TEST COMPOUND	Col 1	Co1 2
BENZENE	4.5	3.4
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-dichlorobenzene	ND	ND
1,4-dichlorobenzene	ND	ND
ETHYL BENZENE	ND	ND
TOLUENE	ND	ND
XYLENES	4.7	8.9

TASK: 4, UNITS: ug/L, GROUP 8020

88030540

VF, 1-W1, GW1, ES

	Analysis	Results
TEST COMPOUND	Col 1	Co1 2
BENZENE	4.9	8.0
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	ND	ND
TOLUENE	0.44	0.56
XYLENES	4.0	4.1

Detection Limits Aromatic Volatile Organics EPA Method 8020

Samples No.: 88030536 - 88030542

Compound	Detection Limits
Benzene	0.2 ug/L
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

24,17

ANALYSIS REPORT FOR WORK ORDER NUMBER 536

ASK: 4, UNITS: ug/L, GROUP 8020

VF,12-W3,6W1,ES VF,1-W2,6W1,ES VF,ET-1,6W1,ES VF,ET-2,6W1,ES VF,ET-3,6W1,ES VF,11-W5,3W1,ES

EST COMPOUND	88030565	88030566	98030567	88030568	88030569	88030570
ENZENE	ND ON	1.2	ND	ND	8,270	ND
HLOROBENZENE	ND	ND	ND	ND	ND	ND
,2-DICHLOROBENZENE	ND CP	ND	ND	ND	ND	ND
,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
THYL BENZENE	OK	DM	ND	ND	535	ND
BLUENE	ND	7.0	ND	ND	12,700	ND
/LENES	ND	51.8	ND	ND	1,740	ND

TASK: 4, UNITS: ug/L, GROUP 8020

88030566

VF, 1-W2, GW1, ES

	Analysis	Results
TEST COMPOUND	Col 1	Col 2
BENZENE	1.2	0.63
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	מא	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	ND	ND
TOLUENE	7.0	7.6
XYLENES	51.8	37.5

TASK: 4, UNITS: ug/L, GROUP 8020

88030569

VF, ET-3, GW1, ES

	Analysi	Analysis Results		
TEST COMPOUND	Col 1	Col 2		
BENZENE	8,720	8,150		
CHLOROBENZENE	ND	ND		
1,2-DICHLOROBENZENE	ND	ND		
1,3-dichlorobenzene	ND	ND		
1,4-dichlorobenzene	ND	ND		
ethyl benzene	535	706		
TOLUENE	12,700	11,300		
xylenes	1,740	1,830		

Detection Limits Aromatic Volatile Organics EPA Method 8020

Samples No.: 88030565 - 88030570

Compound	Detection Limits
Benzene	0.2 ug/L
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

PAGE

ANALYSIS REPORT FOR WORK ORDER NUMBER

538

TASK: 4, UNITS: ug/L, GROUP 8020

VF,ET-5,GM1,ES VF,ET-4,GM1,ES VF,13-M1,GM1,ES VF,ET-7,GM1,ES VF,ET-6,GM1,ES VF,11-M6,SM1,ES

TEST CCHPOUND	98030572	88030573	88030574	88030575	88030576	23030577
BENZENE	2,800	29	ND	153	ND	ND
CHLGROBENZENE	ND	ND	ND	ND	ND	ND OF
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLGROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	מא	ND	ND	ND	ND
ETHYL BENZENE	390	166	ND	178	ND	ND
TOLUENE	3,750	40	ND	470	ND	ND
XYLENES	1,300	900	ND	694	ND	D

TASK: 4, UNITS: ug/L, GROUP 8020

88030572

VF, ET-5, GW1, ES

	Analysia	Results
TEST COMPOUND	Col 1	Col 2
BENZENE	2,800	3,390
CHLOROBENZENE	ND	ND
1,2-dichlorobenzene	ND	ND
1,3-dichlorobenzene	ND	ND
1,4-dichlorobenzene	ND	ND
ETHYL BENZENE	390	187
TOLUENE	3,950	4,460
XYLENES	1,800	1,190

TASK: 4, UNITS: ug/L, GROUP 8020

88030573

VF,ET-4,GW1,ES

	Analysis	Results
TEST COMPOUND	Col 1	Col 2
BEN ZENE	29	54
CHLOROBENZENE	ND	ND
, 2-DICHLOROBENZENE	ND	ND
, 3-dichlorobenzene	ND	ND
,4-dichlorobenzene	NTD	ND
THYL BENZENE	166	126
OLUENE	40	39
KYLENES	900	790

TASK: 4, UNITS: ug/L, GROUP 8020

88030575 VF,ET-7,GW1,ES

	Analysis	
TEST COMPOUND	Col 1	Col 2
BENZENE	153	158
CHLOROBENZENE	ND	ND
1,2-dichlorobenzene	ND	סמ
1,3-Dichlorobenzene	ND	ND
1,4-dichlorobenzene	ND	ИD
ETHYL BENZENE	178	140
TOLUENE	470	473
XYLENES	694	710

Detection Limits Aromatic Volatile Organics EPA Method 8020

Samples No.: 88030572 - 88030577

Compound	Detection Limits
Benzene	0.2 ug/L
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

ANALYSIS REPORT FOR WORK ORDER NUMBER

534

TASK: 4, UNITS: ug/L, SROUP 8020

ND

ND

XYLENES

	VF,2-W5,6W1,ES	VF,2-1,SW1,ES	VF,2-2,SW1,ES	VF,1-W3,6W1,ES	VF,10-W1,6W1,ES	VF,2-N3,8N1,ES
TEST COMPOUND	98030551	88030552	88030553	88030554	88030555	89030556
BENZENE	מא	ND	ND	3,680	ND	ND
CHLOROBENZENE	ND	ND	ND	ND .	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	100	ND	ND
TOLUENE .	ND	ND	ND	1,827	ND	ND

DK

404

ND

ND

FARE

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP 8020

VF,2-#4,6M1,ES VF,10-W2,6M1,ES VF,10-W3,6M1,ES VF,10-W5,6M1,ES VF,10-W4,6M1,ES VF,12-W2,3W1,ES

TEST COMPOUND	38030557	88030558	88030559	88030560	88030561	38030562
BENZENE	ND	ND	ND	167	- 114	ND
CHLOROBENZENE	ND	D	D	ND	ND	ND
1,2-DICHLOROBENZENE	ND	מא	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	16.6	16.2	ND
TOLUENE	ND	ND	ND	149	100	ND
KYLENES	NO	ND	NO	58.7	45.1	ND

04/10/00

ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP 8020

VF, 11-W4, 0	SW1.ES
--------------	--------

TEST COMPOUND	88030563
BENZENE	ND
CHLOROBENZENE 1,2-DICHLOROBENZENE	ND ND
1,3-DICHLOROBENZENE	ND ND
1,4-DICHLOROBENZENE	ND
ETHYL BENZENE	ND .
TOLUENE	ND
XYLENES	ND .

TASK: 4, UNITS: ug/L, GROUP 8020

88030554

VF, 1-W3, GW1, ES

	Analysi	Results
TEST COMPOUND	Col 1	Co1 2
Ben Zene	3,680	3,570
CHLOROBENZENE	ND	ND
1,2-dichlorobenzene	ND	ND
1,3-dichlorobenzene	ND	ND
1,4-dichlorobenzene	ND	ND
ethyl benzene	100	134
TOLUENE	1,827	1,450
XYLENES	404	423

Detection Limits

Aromatic Volatile Organics

EPA Method 8020

Samples No.: 88030551 - 88030563

Compound	Detection Limits
Benzene	0.2 ug/L
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

ENGINEERING SCIENCE INC. 07/22/88

PAGE 2

ANALYSIS REPORT

WORK ORDER NUMBER: 732

JOB NUMBER : ZB0000000400

APPROVED BY

WORK ORDER DATE : 07/08/88

Lab Supervisor

REPORT DATA:

ES ATLANTA/UOLK FIELD ANGB

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

DAN LANE

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (

85) 57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

CONTACT

: DAN LANE

(404)-325-077C

TASK: 4, UNITS: ug/L, GROUP 8020

TEST COMPOUND	VF 950 GW-1 ES 7-7-88 1140 88071335	TRIP BLANK 7-7-88 1203 88071336	VF 934 GW-1 ES 7-7-88 1215 88071337	VF 916 GW-1 ES 7-7-88 1250 88071338
BENZENE	NO	NO	ND	NO
CHLOROBENZENE	HD	HO	HD	ND
1,2-DICHLOROBENZENE	ND	NO	ND	NO
1,3-DICHLOROBENZENE	HO	NO	ND	NO
1,4-DICHLOROBENZENE	NO	ND	NO	ND
ETHYL BENZENE	ND	MD	MD	HD
TOLUENE	ND	HD	MD	ND
XYLENES	MD	HO	HD	ND

DETECTION LIMITS AROMATIC VOLATILE ORGANICS

EPA METHOD 8020 SAMPLES NO.: 88071335-88071338

Compound	Detection	Limits
Benzene	0.2	ug/L
Chlorobenzene	0.2	ug/L
1,2-Dichlorobenzene	0.4	ug/L
1,3-Dichlorobenzene	0.4	ug/L
1,4-Dichlorobenzene	0.3	ug/L
Ethylbenzene	0.2	ug/L
Toluene	0.2	ug/L
Xylenes (Dimethyl benzene)	0.4	ug/L

ANALYTICAL RESULTS FOR
PETROLEUM HYDROCARBONS AND
TOTAL DISSOLVED SOLIDS

ANALYSIS REPORT

WORK ORDER NUMBER:

467

WORK ORDER DATE : 01/27/88

JOB NUMBER : ZB0000000400 APPROVED BY ____

Lab Supervisor

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGB 57 EXECUTIVE PARK STE. 590

ATLANTA, 8A 30329

COMMY DIAGAN

CLIENT DATA:

ES ATLANTAZVOLK FIELD ANGB (95)

57 EXECUTIVE PARK STE. 590

ATLANTA, BA 30329

OF REFORT COPIES: 1

CONTRACT / PO # : ATOTT

DONTACT

: JIMMY DUNCAN

(404) -325-0770

TASK: 3, UNITS: ag/Kg

TEST COMPOUND	VF1,B-3,SS-3,	VF1,8-21,SS-1,	VF1,8-22,SS-1,	VF1,8-4,SS-1,	VF1,8-1,SS-1,	VF1,8-1,SS-2,
	8.5'	1.0'	0.5'	0.5'	0.5'	3.5'
	88010186	88010187	98010188	88010189	88010190	88010191
418.1 PETROLEUM HYDROCARBONS	<100	130	11000	11000	22000	8600

= ,,;; =

ENGINEERING SCIENCE INC. 04/19/58

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 3, UNITS: mg/Kg

TEST COMPOUND	VF1,B-1,SS-3, 8.5' 88010192	VF1,B-2,SS-1, 0.5' 88010193	VF1,8-2,SS-2, 3.5' 38010194	VF1,8-2,55-3, 8.5' 88010195 .	VF1,8-3,SS-1, 1.0' 88010196	vF1,B-3,SS-2, 3.5' 98010197	
418.1 PETROLEUM HYDROCARBONS	8600	260	₹100	.100	<100	(100	

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 3, UNITS: mg/Kg

TEST COMPOUND	VF1,8-4,SS-2, 3.5′ 88010198	VF1,B-4,SS-3, 3.5′ 88010199
4:9.1 PETROLEUM HYDROCARBONS	220	1500

Detection Limits Environmental Quality Parameters Samples No.: 88010186 - 88010199

Parameter	Units	Detection Limits
418.1 Petroleum Hydrocarbons	mg/Kg	100

ANALYSIS REFORT

WURE ORDER NUMBER: 530

115 NUMBER : ZB0000000400

WORK ORDER DATE : 03/05/88

APREDVED BY _///

REPORT DATA:

ES ATLANTAZVOLK FIELD ANGB 57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

JIMMY DUNCAN

CLIENT DATA:

ES ATLANTAZVOLN FIELD ANGB (95)

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

w OF REPORT COPIES: 1

CONTRACT PO # : ATO77

CONTACT

: JIMMY DUNCAN

(404) - 325 - 0770

TASK: 3, UNITS: mg/L

VF.2-W1.SW1.ES VF.1-W4.GW1.ES VF.1-W5.GW1.ES VF.2-W2.GW1.ES VF.1-W1.GW1.ES VF.3/6-W1.SW1.

•	,,,					ES
TEST COMPOUND	88030536	88030537	88030538	88030539	86030540	88030541
418.1 PETROLEUM HYDROCARBONS	<1	<1	(1	(1)	(1	(1
TOTAL DISSOLVED SOLIDS	33.0	550	164	73.0	129	

Detection Limits Environmental Quality Parameters Samples No.: 88030536 - 88030540

Parameter	Units	Detection Limits
418.1 Petroleum Hydrocarbons	mg/L	1
E160.; Total Dissolved Solids	mg/L	10

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

-

Detection Limits Environmental Quality Parameters Sample No.: 88030541

Parameter Units Detection Limits

418.1
Petroleum Hydrocarbons mg/L 1

产名位置

ANALYSIS REPORT

WORK ORDER NUMBER: 538

JOB NUMBER : ZB0000000400

WORK GRDER DATE : 03/10/88

APPROVED BY

Lab Supervisor

REFORT DATA:

ES ATLANTA/VOLK FIELD ANGB 57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

JIMMY DUNCAN

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (

35)

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO #

: AT077

CONTACT

: JIMMY DUNCAN

(404) -325-0770

TASK: 3, UNITS: mg/L

VF,ET-5,6W1,ES VF,ET-4,6W1,ES VF,13-W1,6W1,ES VF,ET-7,6W1,ES VF,ET-6,6W1,ES

TEST COMPOUND	88030572	88030573	88030574	98030575	88030576
418.: PETROLEUM HYDROCARBONS	110	18	<1	1	1
TOTAL DISSOLVED SOLIDS	382	191	<10	109	43.0

Detection Limits Environmental Quality Parameters Samples No.: 88030572 - 88030576

Parameter	Units	Detection Limits
418.1 Petroleum Hydrocarbons	mg/L	1
E160.1 Total Dissolved Solids	mg/L	10

PAGE

85)

ANALYSIS REPORT

WORK ORDER NUMBER: 474

JOB NUMBER : ZB000000400

WORK ORDER DATE : 01/29/88

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGB 57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

JIMMY DUNCAN

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO # : AT077

CONTACT

: JIMMY DUNCAN

(404) -325-0770

TASK: 3, UNITS: mg/Kg

TEST COMPOUND	VF1,B-26,SS-1, 0' 88010214	VF1,8-9,SS-2, 3.5' 88010215	VF1,B-9,SS-3, 8.5' 88010216	VF1,8-8,SS-1, 0' 88010217	-,,,	VF1,8-8,SS-3, 8.5' 88010219	
							-
418.1 PETROLEUM HYDROCARBONS	⟨100	100	<100	160	<100	<100	

PAGE 2

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 3, UNITS: mg/Kg

VF1,B-9,SS-1,

0'

TEST COMPOUND 88010220

418.1 PETROLEUM HYDROCARBONS <100

Detection Limits Environmental Quality Parameters Samples No.: 88010214 - 88010220

Parameter	Units	Detection Limits
418.1 Petroleum Hydrocarbons	mg/Kg	100

ANALYSIS REPORT

WORK ORDER NUMBER:

489

JC8 NUMBER : ZB000000400 WORK ORDER DATE : 02/10/88

APPROVED BY

Lab Supervisor

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGB 57 EYECUTIVE PARK STE. 590

ATLANTA, GA 30329

JIMMY DUNCAN

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (SE)

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

* OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

CONTACT

: JIMMY DUNCAN

(404) - 325 - 0770

TASK: 3, UNITS: mg/Kg

TEST COMPOUND	VF1,8-10,SS-1,	VF1,8-27,SS-1,	VF1,8-10,SS-2,	VF1,B-10,SS-3,	VF1,B-11,SS-1,	VF1,B-11,SS-2
	0.5'	0.5'	3.5'	8.5'	1.0'	3.5'
	98020289	88020290	98020291	88020292	88020293	88020294
418.1 PETROLEUM HYDROCARBONS	570	750	⟨100	<100	<100	<100

FREE

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 3, UNITS: ag/Kg

TEST COMPOUND	VF1,8-11,SS-3, 8.5' 880202 95	VF1,8-12,SS-1 1.0' 88020296	3.5' 88020297	8.5' 88020298	VF1,8-13,SS-1, 1.5' 88020299	VF1,8-28,55-1, 1.5' 88020300	
418.1 PETROLEUM HYDROCARBONS	2900	(100	<100	<10 0	<100	<100	

Detection Limits Environmental Quality Parameters Samples No.: 88020289 - 88020300

Parameter Units Detection Limits
418.1
Petroleum Hydrocarbons mg/Kg 100

PAGE I

ANALYSIS REPORT FOR WORK OFDER NUMBER 500

TASK: 3, UNITS: mg/Kg

TEST COMPOUND	VF1,8-14,SS-3, 8.5' 88020371	VF1,B-15,SS-1, 0.5' 88020372	VF1,8-15,SS-2, 3.5' 88020373	VF1,B-15,SS-3, 8.5' 88020374	VF1,B-13,SS-2, 3.5' 88020375	VF1,8-13,SS-3, 8.5' 88020376	
418.1 PETROLEUM HYDROCARBONS	(100	<100	₹100	<10 0	<100	⟨100	

FARE 3

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 3, UNITS: mg/Kg .

TEST COMPOUND	VF1,B-14,SS-1, 1.0' 88020377	VF1,B-14,SS-2, 3.5' 88020378
418.1 PETROLEUM HYDROCARBONS	< 100	< 100

Detection Limits Environmental Quality Parameters Samples No.: 88020371 - 88020378

Parameter	Units	Detection Limits
418.1 Petroleum Hydrocarbons	mg/Kg	100

ANALYSIS REPORT

WORK ORDER NUMBER:

#08 NUMBER : ZB0000000400

WORK ORDER DATE : 03/08/88

APPROVED BY

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGB 57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

JIMMY DUNCAN

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (85)

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO #

: AT077

534

CONTACT

: JIMMY DUNCAN

(404) - 325 - 0770

TASK: 3, UNITS: ag/L

VF,2-W5,SW1,ES VF,2-1,SW1,ES VF,2-2,SW1,ES VF,1-W3,6W1,ES VF,10-W1,SW1,ES VF,2-W3,GW1,ES

TEST COMPOUND	88030551	88030552	88030553	88030554	88030555	88030556
418.1 PETROLEUM HYDROCARBONS	(1	⟨1	(1	1.6	(1	<1
TOTAL DISSOLVED SOLIDS	48.0	93.0	94.0	215		70.0

Detection Limits Environmental Quality Parameters Samples No.: 88030551 - 88030562

Parameter	Units	Detection Limits
418.1 Petroleum Hydrocarbons	mg/L	1
E160.1 Total Dissolved Solids	mg/L	10

845E 1

ENGINEERING SCIENCE INC. 04/18/98

ANALYSIS REPORT

NORK ORDER NUMBER: 536

JOB NUMBER : ZB000000400

WORK ORDER DATE : 03/09/88

APPROVED BY

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGB 37 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

JIMMY DUNCAN

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (35)

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

CONTACT

: JIMMY DUNCAN

(404) - 325 - 0770

TASK: 3, UNITS: mg/L

VF,12-M3,GM1,ES VF,1-M2,GM1,ES VF,ET-1,GM1,ES VF,ET-2,GM1,ES VF,ET-3,GM1,ES

TEST COMPOUND	88030565	88030566	88030567	88030568	98030569
418.1 PETROLEUM HYDROCARBONS	<1	<1	⟨1	(1	26
TOTAL DISSOLVED SOLIDS	<10	82.0	89.0	57.0	220

Detection Limits Environmental Quality Parameters Samples No.: 88030565 - 88030569

Parameter	Units	Detection Limits
418.1 Petroleum Hydrocarbons	mg/L	1
E160.1 Total Dissolved Solids	mg/L	10

1 2 2 2 E

ANALYSIS REFORT

WORK ORDER NUMBER: 472

JOB NUMBER : ZB000000400

WORK ORDER DATE : 01/28/88

APPROVED BY

REPORT DATA:

ES ATLANTA/ VOLM FIELD ANGB ST EXECUTIVE PARK STE. 590

ATLANTA, 3A 30329

JIMMY CHNCAN

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (35)

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

CONTACT : JIMMY DUNCAN

-(404) - 325 - 0770

TASK: 3, UNITS: mg/kg

TEST COMPOUND	VF1,8-7,SS-3, 8.5' 38010204	VF1,8-6,SS-2, 3.5' 88010205	VF1,8-6,SS-3, 8.5' 88010206	VF1,B-7,SS-1, 0' 88010207	VF1,8-7,SS-2, 3.5' 88010208	VF1,8-5,SS-1,0'
418.1 PETROLEUM HYDROCARBONS	<100	3000	3200	<100	⟨100	280

A47.197.99

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TWG : 3, UNITS: mg/Kg

TEST COMPOUND	VF1,8-5,88-2, 3.5′ 88010210	VF1,8-5,85-3, 10.07 88010211	VF1,B-6,S5, 88010212
418.1 PETROLEUM HYDROCARBONS	500	420	830

Detection Limits Environmental Quality Parameters Samples No.: 88010204 - 88010212

Parameter	Units	Detection Limits
418.1 Petroleum Hydrocarbons	mg/Kg	100

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

178.28.1

ANALYSIS REPORT FOR WORK DRDER NUMBER 534

TASK: 3, UNITS: eg/L

UE 3 1/4 CU1 CO 1	IP 4. 145		10 47 54		4A HE 594 55 5	10 01 00	1.55 VF.12-42.5W1.55
	/F ile 7/	' 54 I ba ve	1 1 7 M 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.F5 VF	11-85 SAL PS UP	. i :: -	[VF] 44 / 44

TEST COMPOUND	38030557	38030558	88030559	88030560	88030561	38030562
419.1 PETROLEUM HYDROCARBONS TOTAL DISSOLVED SOLIDS		ŧ	(1		:	<1 <10

ANALYTICAL RESULTS FOR PCBS

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KS, SROUP 8080

TEST COMPOUND	VF1,B-3,SS-3, 8.5' 88010186	VF1,8-21,SS-1, 1.0' 88010187	VF1,B-22,SS-1, 0.5' 88010188	VF1,8-4,SS-1, 0.5' 88010189	VF1,8-1,SS-1, 0.5' 88010190	VF1,B-1,SS-2, 3.5° 88010191
ALDRIN	NT	NT	NT	NT	NT	NT
ALPHA-BHC	NT	NT	NT	NT	NT	ΝT
BETA-BHC	NT	NT	NT	NT	NT	¥T
DELTA-BHC	NT	NT	NT	NT	NT	V.T
SAMMA-BHC	NT	NT	NT	YT	NT	NT
CHLORDANE	NT	NT	NT	NT	NT	NT
4,4'-000	NT	NT	NT	NT	NT	NT
4,4'-DDE	NT	NT	NT	NT	NT	NT
4,4'-007	YT	NT	NT	NT	NT	NT
DIELDRIN	NT	NT	NT	NT	NT	NT
ENDOSULFAN I	NT	NT	NT	NT	NT	NT
ENDOSULFAN II	NT	NT	NT	NT	NT	NT
ENDOSULFAN SULFATE	NT	NT	MT	NT	NT	NT
ENDRIN	NT	NT	NT	NT	NT	NT
ENDRIN ALDEHYDE	NT	NT	NT	NT	NT	NT
HEPTACHLOR	NT	NT	NT	NT	NT	NT
HEPTACHLOR EPCXIDE	NT	NT	NT	NT	NT	NT
KEPONE	NT	NT	NT	NT	NT	NT
METHOXYCHLOR	NT	NT	NT	NT	NT	NT
TOXAPHENE	NT	NT	NT	NT	NT	NT
PC9-1016	ND	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	4D
PCB-1242	NO	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	NO	ND	ND
PC3-1260	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/K6, GROUP 8080

TEST COMPOUND	VF1,B-1,SS-3, 3.5' 88010192	VF1,B-2,SS-1, 0.5' 88010193	VF1,B-2,SS-2, 3.5' 88010194	VF1,8-2,SS-3, 3.5' 88010195	VF1,B-3,SS-1, 1.0' 88010196	VF1,8-3,88-2, 3.5' 88010197
ALDRIN	NT	NT	NT	NT	NT	NT
ALPHA-BHC	MT	NT	NT	NT	NT	NT
BETA-BHC	NT	NT	NT	NT	NT	YT
DELTA-840	NT	NT	NT	NT	NŢ	NT
SAMMA-BHC	NT	NT	NT	NT	NT	N T
CHLORDANE	NT	NT	NT	NT	NT	NT
4,47-000	NT	NT	NT	NT	NT	NT
4,4'-30E	NT	NT	NT	NT	NT	NT
4,44-007	NT	MT	NT	NT	NT	NT
DIELORIN	NT	NT	NT	NT	NT	NT
ENDOSULFAN I	Tr.	NT	NT	NT	NT	NT
ENDOSULFAN II	NT	NT	NT	NT	NT	NT
ENDOSULFAN SULFATE	¥T	NT	NT	NT	NT	NT
ENDRIN	NT	NT	NT	NT	NT	NT
ENDRIN ALDEHYDE	NT	NT	NT	NT	NT	NT
HEPTACHLOR	NT	NT	NT	NT	NT	NT
HEPTACHLOR EPOXIDE	NT.	NT	NT	NT	NT	NT
KEPONE	NT	NT	NT	NT	NT	NT
METHOXYCHLOR	NT	NT	NT	NT	NT	NT
TOXAPHENE	NT	NT	NT	NT	NT	NT
PCB-1016	OP	ND	ND	ND	ND	ND
PC8-1221	ND	ND	ND	ND	ND	ND
PCB-1232	ND	סא	ND	ND	ND	סא
PCB-1242	ND	ND	ND	ND	ND	ND
PC3-1248	ND	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 8080

TEST COMPOUND	VF1,8~4,SS-2, 3.5' 88010178	VF1,B-4,SS-3, 8.5' 88010199
ALDRIN	NT	NT
ALPHA-BHC	NT	NT
BETA-BHC	NT	NT
OELTA-BHC	NT	NT
GAMMA-BHC	NT	NT
CHLORDANE	NT	NT
4,4'-000	NT	NT
4,4'-DDE	NT	NT
4,4'-DDT	NT	NT
DÍELDRIN	NT	NT
ENDOSULFAN I	NT	NT
ENDOSULFAN II	NT	NT
ENDOSULFAN SULFATE	NT	NT
ENDRIN	NT	NT
ENDRIN ALDEHYDE	NT	NT
HEFTACHLOR	NT	NT
HEPTACHLOR EPOXIDE	NT	NT
KEPONE	NT	NT
METHOXYCHLOR	NT	NT
TOXAPHENE	NT	NT
PCB-1016	ND	ND
PCB-1221	ND -	ND
PCB-1232	ND	ND
PCB-1242	ND	ND
PCB-1248	ND	ND
PCB-1254	ND	ND
PCB-1260	ND	ND

Detection Limits PCBs

PCDS

EPA 608/8080

Samples No.: 88010186-0187, 88010193-0198

Compound	Detection Limits
PCB-1016	10 ug/Kg
PCB-1221	10
PCB-1232	10
PCB-1242	10
PCB-1248	10
PCB-1254	10
PCB-1260	10

Detection Limits PCBs

EPA 608/8080

Samples No.: 88010188-0192, 88010199

Compound	Detection Limits
PCB-1016	100 ug/Kg
PCB-1221	100
PCB-1232	100
PCB-1242	100
PCB-1248	100
PCB-1254	200
PCB-1260	200

ANALYSIS REPORT FOR WORK ORDER NUMBER 470

TASK: 4, UNITS: ug/K6, GROUP 8080

	VF1,B-7,SS-3, a.5'	VF1,8-6,SS-2, 3.5'	VE1,9-6,55-3, 8.5'	VF1,8-7,SS-1, O'	VF1,8-7,8S-2, 3.5'	VF1,8-5,55-1,0/
TEST COMPOUND	88010204	88010205	88010206	88010207	890 10208	68010209
ALDRIN	NT	NT	NT .	NT	NT	NT
ALPHA-BHC	NT	NT	NT	NT	NT	NT
BETA-9HC	NŢ	NT	NT	NT	NT	NT
DELTA-BHC	NT	NT	NT	NT	NT	NT
SAMMA-BHC	NT	NT	NT	NT	¥T	NT
CHLORDANE	NT	NT	NT	NT	NT	NT
4,4'-000	NT	NT	NT	NT	NT	NT
4,4'-DDE	NT	NT	NT	NT	NT	NT
4,4/-007	NT	NŤ	NT	NT	NT	NT
CIELDRIN	NT	· NT	NT	NT	NT	NT
ENDOSULFAN I	NT	NT	NT	ΝT	VT	NT
ENDCEULFAN II	NT	NT	NT	NT	NT	NT
ENDOSULFAN SULFATE	NT	NT	NT	NT	NT	NT
ENDRIN	NT	NT	NT	NT	NT	AT
ENDRIN ALDEHYDE	NT	NT	NT	NT	NT	NT
HEPTACHLOR	NT	NT	NT	NT	NT	NT
HEPTACHLOR EPOXIDE	NT	NT	NT	NT	NT	NT
KEPONE	NT	NT	NT	NT	NT	NT
METHOXYCHLOR	NT	NT	NT	NT	NT	47
TOXAPHENE	NT	NT	NT	NT	NT	NT
PC9-1016	ND	ND	ND	NB	ND	D
PCB-1221	4D	ND	ND	ND	ND .	ND
PCB-1232	ND	ND	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND	ND	ND
PCB-1248	מא	ND	ND	ND	ND	ND
PC9-1254	ND	ND	ND	ND	ND	ND
°C8-1260	ND	ND	ND	ND	ND	ND

ENGINEERING BOIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/kG, GROUP 8080

TEST COMPOUND	VF1,8-5,89-2, 3.5′ 88010210	VF1,8-5,SS-3, 10.0′ 88010211	VF1,8-6,59-1, 0/ 58010212
ALORIN	NT	NT	NT
ALAHA-6HC	NT	A) 丁	পুক
SETA-SHC	NT	NT	MT
7.5%, 7.4 ~8HC	NT	NT	MΨ
GRMMA-BHC	NT	NT	NT
CHLORDANE	NŢ	NT	NT
4,47-00D	NT	NT	NT
4,4/-ODE	NT	NT	NT
4,47-DDT	NT	NT	NT
DIELDRIN	NT	NT	NT
ENDOSULFAN I	NT	NT	NT
ENDOSULFAN II	NT	NT	NT
ENDOSULFAN SULFATE	NT	NT	NT
ENDRIN	NT	NT	NT
ENDRIN ALDEHYDE	NT	NT	NT
HEPTACHLOR	NT	NT	NT
HEPTACHLOR EPOXIDE	NT	NT	NT
⊧ EPONE	TM	NT	NT
METHOXYCHLOR	NT	NT	NT
TOXAPHENE	NT	NT	NT
FCS-1016	ND	ND	ND
PC8-1221	ND	ND	ND
PCB-1232	ND	ND	ИD
PCB-1242	ND	ND	ND
PCB-1248	ND	ND	ND
PCB-1254	ФИ	ND	ND
PCB-1260	ND	ND	ND

Detection Limits PCBs EPA 608/8080

Samples No.: 88010204-0205, 88010207-0210

Compound	Detection Limits
PCB-1016	10 ug/Kg
PCB-1221	10
PCB-1232	10
PCB-1242	10
PCB-1248	10
PCB-1254	10
PCB-1260	10

Detection Limits PCBs EPA 608/8080

Samples No.: 88010206, 88010211-0212

Compound	Detection Limits
PCB-1016	100 ug/Kg
PCB-1221	100
PCB-1232	100
PCB-1242	100
PCB-1248	100
PCB-1254	200
PCB-1260	200

ENGINEERING SCIENCE INC. 04/13/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 4, UNITS: ug/K6, SROUP 8080

TEST COMPOUND	VF1,8-26,SS-1, 0' 88010214	VF1,B-9,SS-2, 3.5' 88010215	VF1,8-9,SS-3, 8.5' 98010216	VF1,B-8,SS-1, 0' 88010217	vF1,B-8,SS-2, 3.5' 88010218	VF1,8-8,SS-3, 8.5' 88010219
ALDRIN	NT	NT	NT	NT	NT	 YT
OLPHA-BHC	NT	NT	NT	NT	NT	NT
BETA-BHC	41	NT	NT	NT	NT	NT
DELTA-9HC	NT	NT	NT	NT	NT	NT
SAMMA-BHC	NT	NT	NT	NT	NT	NT
CHLORDANE	NT	NT	NT	NT	NT	NT
4,4'-000	NT	NT	NT	NT	NT	NT
4,4'-DDE	NT	NT	NT	NT	NT	NT
4,4'-DDT	NT	NT	NT	NT	NT	NT
DIELDRIN	NT	NT	NT	NT	NT	NT
ENDOSULFAN I	NT	NT	NT	NT	NT	NT
ENDOSULFAN II	NT	NT	NT	NT	NT	NT
ENDOSULFAN SULFATE	NT	NT	NT	NT	NT	NT
ENDRIN	NT	NT	NT	NT	NT	NT
ENDRIN ALDEHYDE	NT	NT	NT	NT	NT	NT
HEPTACHLOR	NT	NT	NT	NT	NT	NT
HEPTACHLOR EPOXIDE	NT	NT	NT	NT	NT	NT
KEPONE	NT	NT	NT	NT	NT	NT
METHOXYCHLOR	NT	NT	NT	NT	NT	NT
TOXAPHENE	NT	NT	NT	NT	NT	NT
PCB-1016	ND	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	ND
PCB-1242	ND	D	ND	ND	ND	ND
PCB-1248	NO	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND	ND	ND
PCB-1260	ND CP	ND	ND	ND	ND	ND

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TABM: 4, UNITS: ug/KG, GROUP 2080

	VF1,3-9,3S-1, O'
TEST COMPOUND	33010220
ALDRIN	NT
ALPHA-BHC	NT
RETA-BHC	NT
DELTA-SHC	NT
GAMMA-BHC	NT
CHLORDANE	NT
4,4°-50D	NT
4,4 (-DDE	NT
a,4'-DDT	NT
DIELDRIN	NT
ENDOSULFAN I	NT
ENDOSULFAN II	NT
ENDOSULFAN SULFATE	NT
ENDRIN	NT
ENDRIN ALDEHYDE	NT
HEPTACHLOR	NT
HEPTACHLOR EPOXIDE	NT
KEPONE	NT
METHOXYCHLOR	NT
TOXAPHENE	NT
PCB-1016	ND
PCB-1221	ND
FCB-1232	ND
POS-1242	ND
PCB-1248	ND
FCB-1254	ND
PCB-1260	ND

Detection Limits PCBs EPA 608/8080

Samples No.: 88010214, 88010216, 88010218-0220

Compound	Detection Limits
PCB-1016	10 ug/Kg
PCB-1221	10
PCB-1232	10
PCB-1242	10
PCB-1248	10
PCB-1254	10
PCB-1260	10

Detection Limits PCBs EPA 608/8080

Samples No.: 88010215, 88010217

Compound	Detection Limits
PCB-1016	100 ug/Kg
PCB-1221	100
PCB-1232	100
PCB-1242	· 100
PCB-1248	100
PCB-1254	200
PCB-1260	200

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 4, LNITS: ug/KG, GROUP PCB

TEST COMPOUND	VF1,8-10,SS-1, 0.5' 88020289	VF1,B-27,SS-1, 0.5' 88020290	VF1,B-10,SS-2, 3.5' 88020291	VF1,8-10,SS-3, 8.5' 88020292	VF1,B-11,SS-1, 1.0' 88020293	VF1,8-11,SS-2 . 3.5' 88020294
PCB-1016	ND	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	VD
909-1242	ND	ND	ND	ND	DI	ND
208-1248	ND	ND	ND	ND	OP	DK
PS3-1254	ND	ND	ND	ND	ND	ND
PCB-1260	ND	ON	ND	DM	ND	D

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/KB, GROUP PCB

TEST COMPOUND	VF1,8-11,SS-3, 8.5' 88020295	VF1,B-12,SS-1 1.0' 88020296	VF1,B-12,SS-2, 3.5' 88020297	VF1,B-12,SS-3, 8.5' 88020298	VF1,B-13,SS-1, 1.5' 88020299	VF1,8-28,SS-1, 1.5' 88020300
PC8-1016	ND	ND	ND	ND	ND	ND
PC9-1221	ND	D	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ON	ND GN
PCB-1242	ND	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND	ND
PCB-125 4	ND	ND	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND	ND	ND

Detection Limits PCBs

EPA 608/8080

Samples No.: 88020291, 88020293-0294, 88020296-0300

Compound	Detection Limits
PCB-1016	10 ug/Kg
PCB-1221	10
PCB-1232	10
PCB-1242	10
PCB-1248	10
PCB-1254	10
PCB-1260	10

Detection Limits PCBs

EPA 608/8080

Samples No.: 88020289-0290, 88020292, 88020295

Compound	Detection Limits
PCB-1016	100 ug/Kg
PCB-1221	100
PCB-1232	100
PCB-1242	100
PCB-1248	100
PCB-1254	200
PCB-1260	200

ENGINEERING SCIENCE INC. 04/18/88

PAGE 8

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 4, UNITS: ug/K6, GROUP PCB

TEST COMPOUND	VF1,B-14,SS-3, 3.5' 88020371	VF1,8-15,SS-1, 0.5' 88020372	VF1,8-15,SS-2, 3.5' 88020373	VF1,8-15,SS-3, 8.5' 88020374	VF1,8-13,5S-2, 3.5' 98020375	VF1,8-13,SS-3, 8.5' 88020376
°C3-1016	ND ND	ND	ND	ND	ND	ND
PCB-1221	dh	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	ND
PCB-1242	4D	ND	ND	ND	ND	OP
PC8-1248	ND	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND	ND	ND
PCB-1250	ND	ND	ND	ND	ND	ND

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 4, UNITS: ug/KG, GROUP PCB

	VF1,B-14,SS-1, 1.0'	VF1,8-14,55-2, 3.5^
TEST COMPOUND	88020377	88020378
FCB-1016	ND	ND
PCB-1221	ND	αи
FCB-1232	ND	ND
PCB-1242	ND	ND
PCB-1248	ND	ND
PCB-1254	ND	ND
PCB-1260	ND	ND

Detection Limits PCBs EPA 608/8080

Samples No.: 88020371 - 88020378

Compound	Detection Limits
PCB-1016	10 ug/Kg
PCB-1221	10
PCB-1232	10
PCB-1242	10
PCB-1248	10
PCB-1254	10
PCB-1260	10

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 538

TASK: 4, UNITS: ug/L, SROUP PCB

VF,ET-5,6W1,ES VF,ET-4,6W1,ES VF,ET-7,GW1,ES VF,ET-6,SW1,ES

TEST COMPOUND	88030572	88030573	88030575	88030576
PCB-1016	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND
PCB-1242	ND	ND	ND	MD
PC9-1248	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND

PCBs

EPA 608/8080

Samples No.: 88030572-0573, 88030575-0576

Compound	Detection Limits
PCB-1016	5.0 ug/L
PCB-1221	5.0
PCB-1232	5.0
PCB-1242	5.0
PCB-1248	5.0
PCB-1254	10.0
PCB-1260	10.0

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 536

TASK: 4, UNITS: ug/L, GROUP PCB

VF,12-W3,6W1,ES VF,1-W2,6W1,ES VF,ET-1,6W1,ES VF,ET-2,6W1,ES VF,ET-3,6W1,ES

TEST COMPOUND	38030565	88030566	88030567	88030568	88030569
PCB-1016	ND	ND	ND	ND	ND
PC9-1221	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND
PCB-1254	D	ND	ND	ND	ND
PC9-1260	ND	מא	ND	ND	ND

Revised Report 6-27-88

Detection Limits PCBs EPA 608/8080

Samples No.: 88030565 - 88030569

Compound	Detection Limits
PCB-1016	5.0 ug/L
PCB-1221	5.0
PCB-1232	5.0
PCB-1242	5.0
PCB-1248	5.0
PCB-1254	10.0
PCB-1260	10.0

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

-

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 530

TASK: 4, UNITS: ug/L, GROUP FCB

	VF,1-W4,GW1,ES	VF,1-W5,GW1,ES	VF,1-W1,9W1,E5
TEST COMPOUND	88030537	88030538	38030540
PCB-1016	ND	ND	ND
PCB-1221	ND	ND	ND
PCB-1232	ND	ND	ND
PC8-1242	ND	ND	ND
PCB-1248	ND	ND	ND
PCB-1254	ND	ND	ND
205-12 4 0	ND	ND	ND

Detection Limits

PCBs

EPA 608/8080

Samples No.: 88030537-0538, 88030540

Compound	Detection Limits
PCB-1016	5.0 ug/L
PCB-1221	5.0
PCB-1232	5.0
PCB-1242	5.0
PCB-1248	5.0
PCB-1254	10.0
PCB-1260	10.0

ENGINEERING SCIENCE INC. 04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP PCB

	VF,1-W3,GW1,ES
TEET COMPOUND	88030554
F0B-1015	MD
PCS-1221	ND
PCB-1272	ND
PCB-1242	ND
FCB-1248	ND
ACB-1254	ND
PCB-1250	ND

Detection Limits PCBs EPA 608/8080

Sample No.: 88030554

Compound	Detection Limits
PCB-1016	5.0 ug/L
PCB-1221	5.0
PCB-1232	5.0
PCB-1242	5.0
PCB-1248	5.0
PCB-1254	10.0
PCB-1260	10.0

ANALYTICAL RESULTS FOR BASE/NEUTRAL ACID EXTRACTABLES

PRIORITY POLLUTANT ANALYSIS PESTICIDES & PCBS - SW 8270 MATRIX: SOIL

Client: Attn: ES Atlanta

Address:

Ernie Daly
57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329

Compound	Detection	n Limits
Aldrin	200	ug/KG
Alpha-BHC	200*	ug/KG
Beta-BHC	400	ug/KG
Delta-BHC	300	ug/KG
Gamma-BHC (Lindane)	200*	ug/KG
Chlordane	4000	ug/KG
4,4'-DDD	300	ug/KG
4,4'-DDE	600	ug/KG
4,4'-DDT	500	ug/KG
Dieldrin	300	ug/KG
Endosulfan I	800 °	ug/KG
Endosulfan II	800 *	ug/KG
Endosulfan sulfate	600	ug/KG
Endrin	800 *	ug/KG
Endrin aldehyde	300 *	ug/KG
Endrin Ketone	300 *	ug/KG
Heptachlor	200	ug/KG
Heptachlor epoxide	200	ug/KG
Methoxychlor	300 *	ug/KG
Toxaphene	4000	ug/KG
Arochlor-1016	4000	ug/KG
Arochlor-1221	4000	ug/KG
Arochlor-1232	4000	ug/KG
Arochlor-1242	4000	ug/KG
Arochlor-1248	4000	ug/KG
Arochlor-1254	4000	ug/KG
Arochlor-1260	4000	ug/KG

^{*} Denotes instrument detection limit. EPA has not yet determined method detection limits for these compounds.

PRIORITY POLLUTANT ANALYSIS BASE NEUTRALS - SW 8270 MATRIX: SOIL

Client: Attn: ES Atlanta

Address:

Ernie Daly 57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329

Compound	Detection Limits	
Acetophenone	660 *	ug/KG
Aniline	660*	ug/KG
4-Aminobiphenyl	660*	ug/KG
4-Chloroaniline	1300	ug/KG
1-Chloronaphthalene	660*	ug/KG
Dibenzofuran	660	ug/KG
p-Dimethylaminoazobenzene	660 	ug/KG
7.12-Dimethylbenz(a)anthracene	660*	ug/KG
a-,a-Dimethylphenethylamine	1300*	ug/KG
Diphenylamine	660*	ug/KG
1,2-Diphenylhydrazine	660*	ug/KG
Ethyl methanesulfonate	660*	ug/KG
3-Methylcholanthrene	660 	ug/KG
Methyl methanesulfonate	660 *	ug/KG
3-Methylcholanthrene	660 *	ug/KG
2-Methylnaphthalene	660	ug/KG
1-Naphthylamine	660 *	ug/KG
2-Naphthylamine	660 *	ug/KG
2-Nitroaniline	3300	ug/KG
3-Nitroaniline	3300	ug/KG
4-Nitroaniline	3300	ug/KG
N-Nitroso-di-n-butylamine	660	ug/KG
N-Nitrosopiperidine	66 0*	ug/KG
Pentachlorobenzene	660 =	ug/KG
Pentachloronitrobenzene	660#	ug/KG
Phenacetin	660●	ug/KG
2-Picoline	660*	ug/KG
Pronamide	10000	ug/KG
1,2,4,5-Tetrachlorobenzene	660 *	ug/KG

^{*} Denotes instrument detection limit. EPA has not yet determined method detection limits for these compounds.

PRIORITY POLLUTANT ANALYSIS ACID EXTRACTABLES - SW 8270 MATRIX: SOIL

Client:

ES Atlanta

Attn:

Ernie Daly

Address:

57 Executive Park South N. E. - Suite 590 Atlanta, Ga. 30329

Compound	Detection	Limits
2-Chlorophenol	660	ug/KG
2-Nitrophenol	660	ug/KG
Phenol	660	ug/KG
2,4-Dimethylphenol	660	ug/KG
2,4-Dichlorophenol	660	ug/KG
2,4,6-Trichlorophenol	660	ug/KG
4-Chloro-3-methylphenol	1300	ug/KG
2,4-Dinitrophenol	3300	ug/KG
2,6-Dichlorophenol	660*	ug/KG
2-Methyl-4,6-Dinitrophenol	3300	ug/KG
Pentachlorophenol	3300	ug/KG
4-Nitrophenol	3300	ug/KG
Benzoic Acid	3300	ug/KG
2-Methylphenol	. 660	ug/KG
3- & 4-Methylphenol	660	ug/KG
2,3,4,6-Tetrachlorophenol	660 *	ug/KG
2.4.5-Trichlorophenol	660	ug/KG

^{*} Denotes instrument detection limit. EPA has not yet determined method detection limits for these compounds.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 27, 1968
Date Reported: March 3, 1988

P.O. No.:

DATE REISSUED: March 10,1988

Job No. : AT077

FOR:

ES:Atlanta/Uolk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park 3.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880190

Sample No.:

OF1 B-1 SS1, 0.51

Date Sampled:

1-26-38

Time Sampled:

840 2-1-88

Date Extracted:

2-12-88

Date Analyzed:

	etection Limits	ANALYTICAL RESULTS
r	mg/kg	mg/kg
1,3-Dichloroberzene	6.6	ND
1,4-Dichlorobenzene	6.6	ND
Hexachloroethane	6.6	ND
Bis(2-chloroethyl)ether	6.6	ND
1,2-Dichlorobenzene	6.6	ND
N-Nitrosodimethylamine	25 .	ND
Bis(2-chloroisopropyl)eth	er 6.6	ИD
N-Nitrosodi-n-propyl amir		ИD
Hexachlorobutailene	6.6	ND
1,2,4-Trichlorobenzene	6.6	ND
Nitrobenzene	6.6	ND
Isophorone	6.6	ND
Naphthalene	6.6	ND
Bis(2-chloroethoxy)methar	e 6.6	ND
2-Chloronaphthalene	6.6	ND
Hexachlorocyclopentadiene	6.6	ND
Acenaphthylene	6.6	ND
Acenaphthene	6.6	ND
Dimethyl phthalate	6.6	ND
2,6-Dinitrotoluene	6.6	ND
Fluorene	6.6	ND
2,4-Dinitrotoluene	6.6	ND
Diethyl phthalate	6.6	ND
N-Nitrosodiphenylamine	6.6	ND
Hexachlorobenzene	6.6	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

P.O. No. Date Received January 27, 1988 Date Reported: March 3, 1988 DATE REISSUED: March 10, 1988 Job No. AT027

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 380190

Sample to. UF1 8-1 351, 0.51 1-26-63

Date Sampled. Time Sampled: 340 Date Extracted: 2-1-88 Date Hhalyzed 2-12-88

Compound Detection ANALYTICAL RESULTS
Limit
marks Limit mg/kg mg/kg Anthracene 6.6
Dibutyl phthalate 5.6
Fluoranthene 4-Chlorophi ND ND ND ND 4-Chlorophenyl phenyl ether 6.6 ND Purene 6.6 ND Butyl Benzyl phthalate 6.6 ND Bis(2-ethylhexyl) phthalate 6.6 ND Chrysene ND 4-Bromophenyl phenyl ether 6.6 ND Benzo(a)anthracene Di-n-octylphthalate 6.6 ND 5.6 ND D1-n-octylphthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene 6.6 ND 6.6 ND Benzidine 60 ND Benziume

3,3'-Dichlorobenzidine

Benzo(a)pyrene

Indeno(1,2,3-cd)pyrene

Dibenzo(a,h)anthracene

Benzo(ghi)perylene

6.6

Benzo(ghi)perylene

6.6 ND ND ND ND ND Benzyl Alcohol 13 ND

Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil (continued)

Date Received: January 27, 1988 P.O. No.:

Date Reported: March 3, 1988 Job No. AT077

DATE REISSUED: March 10, 1988

Page 3 of 5

For: ES:Atlanta/Oolk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

 Lab Number:
 880190

 Sample No.:
 UF1 B-1 SS1, 0.5*

 Date Sampled:
 1-26-88

 Time Sampled:
 940

 Date Extracted
 2-1-88

 Date Analyzed:
 2-12-88

Compound 1	Detection Limits	Analytical Results
	mg/kg	mg/kg
Acetophenone	*	ND
Aniline	*	ND
4-Aminobiphenyl	*	ND
4-Chloroaniline	13	ND
l-Chloronaphthalene	*	ND
Dibenzofuran	6.6	ND
p-Dimethylaminoazobenzene	*	ND
7,12-Dimethylbenz(a)anthrac	cene*	ND
a-,a-Dimethylphenethylamin		ND
Diphenylamine	*	ND
1,2-Diphenylhydrazine	*	ND
Ethyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
Methyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
2-Methylnaphthalene	6.6	9. <i>7</i>
l-Naphthylamine	*	ND
2-Naphthylamine	*	ND
2-Nitroaniline	33	ND
3-Nitroaniline	33	ND
4-Nitroaniline	33	ND
N-Nitroso-di-n-butylamine	*	ND
N-Nitrosopiperidine	*	ND
Pentachlorobenzene	*	ND
Pentachloronitrobenzene	*	ND
Phenacetin	*	ND
2-Picoline	*	ND
Pronamide	*	ND
1,2,4,5-Tetrachlorobenzene	*	ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 27, 1988 Date Reported: March 3, 1988 DATE REISSUED: March 10, 1988 ES:Atlanta/Colk Field ANGB ATTN:Mr. Jim Duncan Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 880190 Lab Number UF1 B-1 SS1, 0.5' Sample No. Date Sampled 1-26-88 Time Sampled 340 Date Extracted 2-1-88 2-12-38 Pate Analyzed: Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg Alpha-BHC ND Gamma-BHC Beta-BHC ND ND 2 3 Heptachlor Delta-BHC ND ND 2 ND Aldrin Heptachlor epokide Endosulfan I Dieldrin ND ND ND 4.4'-DDE ND ô --* ND Endrin Endosulfan II ND 4,41-5DD ND 3 4,4'-DDT 5 ND Endosulfan Sulfate Endrin aldehyde ND --* ND Endrin Ketone ND --* 40 ND Chlordane Methoxychlor HD _-* Toxaphene 40 ND Aracler-1016 40 ND ND 40 Aroslar-1221 40 ND Aroclor-1232 40 ND Aroclor-1242 Arcclor-1248 40 ND

40

40

Aroclor-1254

Aroclor-1260

ND

ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

page 5 or 5

Date	Reported:	January 27, 1999 March 3, 1988	P.O. No.: Job No.: AT077
		March 10, 1983	

FOR:	ES:Atlanta/Oolk Field ANGB	ATTN: Mr. Jim Duncan
	157 Turana na Paris 3 5 Guida 500	

Address:57 Executive Park 5.E., Suite 590 Atlanta, Georgia 30329

Lab Number:	980190
Sample No.:	UF1 B-1 3S1, 0.5
Date Sampled	1-26-88
Time Sampled:	940

Time Sampled: 840

Date Extracted: 2-1-88

Date Analyzed: 2-12-88

•	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	6.6	ND
2-Nitrophenol	6.6	ND
Phenol	6.5	ND
2,4-Dimethylphenol	6.6	ND
2,4-Dichlorophenol	6.6	ND
2,4,6-Trichlorophenol	6.6	ND
4-Chloro-3-methylphenol	13	ИD
2,4-Dinitrophenol	33	ND
2,3-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 33	ND
Pentachlorophenol	33	ND
4-Nitrophenol	33	ND
Benzoic Acid	33	ND
2-Methylphenol	6.6	ND
3- & 4-Methylphenol	6.6	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	6.6	ND

Lus A Verg

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 9270

Matrix: Soil

| Date Received:

January 27, 1988

P.O. No.: Job No. : AT077

Date Received: January 27, 1988
Date Reported: March 3, 1988

DATE REISSUED: March 10,1988

ES.Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

380191

Sample No.: UF1 B-1 SS-2, 3.5

1-26-38 910

Time Sampled: Date Extracted:

Date Sampled:

2-1-88

Date Analyzed:

2-12-88

_	stection Limits ng/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	6.6	ND
1,4-Dichlorobenzene	6.6	ND
Hexachloroethane	6.6	ND .
Bis(2-chloroethyl)ether	6.6	ND
1,2-Dichlorobenzene	6.6	ND
N-Nitrosodimethylamine	25	ND
Bis(2-chloroisopropyl)ethe		ND
N-Nitrosodi-n-propyl amine		ND
Hexachlorobutadiene	6.6	ND
1,2,4-Trichlorobenzene	6.6	D
Nitrobenzene	6.6	ND
Isophorone	6.6	ND
Naphthalene	6.6	7.3
Bis(2-chloroethoxy)methane	6.6	ND
2-Chloronaphthalene	6.6	ND
Hexachlorocyclopentadiene	6.6	ND
Acenaphthylene	6.6	ND
Acenaphthene	6.6	ND
Dimethyl phthalate	6.6	ND
2,6-Dinitrotoluene	6.6	ND
Fluorene	6.6	ND
2,4-Dinitrotoluene	6.6	ND
Diethyl phthalate	6.6	ND
N-Nitrosodiphenylamine	6.6	ND
Hexachlorobenzene	6.6	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: Date Reported: March 3, 1988

January 27, 1988

P.O. No. Job No. : AT077

DATE REISSUED: March 10, 1988

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number 880191

Sample No. UF1 B-1 3S-2, 3.5'

Date Sampled: 1-26-88 Time Sampled: 910 Date Extracted: 2-1-88 2-12-88 Date Analyzed:

Compound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	6.6	ND
Anthracene	6.6	ND
Dibutyl phthalate	5 . 6	ND
Fluoranthene	6.6	ND
4-Chlorophenyl phenyl et	her 6.6	ND
Pyrene	6.6	ND
Butyl Benzyl phthalate	6.6	ND
Bis(2-ethylhexyl) phthal	ate 6.6	ND
Chrysene	6.6	ND
4-Bromophenyl phenyl eth	er 6.6	ND
Benzo(a)anthracene	6.6	ND
Di-n-octylphthalate	6.6	ND
Benzo(b)fluorantheme	6.6	ND
Benzo(k)fluoranthene	6.6	ND
Benzidine	60	ND
3,3'-Dichlorobenzidine	13	ND
Benzo(a)pyrene	6.6	ND
Indeno(1,2,3-cd)pyrene	6.6	ND
Dibenzo(a,h)anthracene	6.6	ND
Benzo(ghi)perylene	6.6	ND
Benzyl Alcohol	13	ND

Matrix: Soil (continued)

Date Received: January 27, 1988
Date Reported: March 3, 1988
DATE REISSUED: March 10, 1988 P.O. No.: Job No. : ATOZZ

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Pack S.E., Suite 590

Atlanta, Georgia 30329

380191 Lab Number:

UF1 B-1 SS-2, 3.51 Sample No.:

1-26-38 Date Sampled: Time Sampled: 910 Date Extracted: 2-1-38

2-12-88 Date Analyzed Compound Analutical Pesults

Compound	Detection Limits mg/kg	mg/kg	
I de la		ND .	
Acetophenone Aniline		ND	
	·*	ND ND	
4-Aminobiphenyl		ND ND	
4-Chloroaniline	13		
1-Chloronaphthalene	- -	ND	
Dibenzofuran	6.6	ND	
p-Dimethylaminoazobenzene		ND	
7,12-Dimethylbenz(a)anthr		ND	
"a-,a-Dimethylphenethylami		ND NB	
Diphenylamine	*	ND	
1,2-Diphenylhydrazine	*	ND	
Ethul methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	6.6	15	
1-Naphthylamine		ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	33	ND	
3-Nitroaniline	33	ND	
4-Nitroaniline	33	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	 ★	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzen	e*	ND	

⁺EPA has not yet determined detection limits for these compounds

Priority Pollutant Analysis Pesticides and PCBs ~ SW 8270 Matrix: Soil

Date Received: January 27, 1988
Date Reported: March 3, 1988
DATE REISSUED: March 10, 1988 P 0. No Job No. : ATUZZ FOR: ES Atlanta Wolk Field ANGB ATTN:Mr Jim Duncan Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 Lab Number: 380191 Sample No.: OF1 B-1 SS-2, 3.5 Date Sampled: 1-26-83 Time Sampled 910 2-1-88 Date Extracted: 2-12-38 Date Analyzed Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg Alpha-BHC Gamma-BHC ND ND Beta-BHC ND Heptachlor ND Delta-BHC ND ND Aldrin ND Heptachlor epoxide Endosulfan I ND Dieldrin 3 ND 4,4'-DDE ND ND Endrin Endosulfan II 4,4'-DDD ND 3 ND 4,4'-DDT 5 ND Endosulfan Sulfate ND ND Endrin aldehyde ND Endrin Ketone NĎ 40 Chlordane ND dethoxychlor 40 Toxaphene ND ND Aroclor-1016 40 40 ND Aroclor-1221 40 ND Aroclor-1232 ND Aroclor-1242 40

40

40

40

Araclar-1248

Aroclor-1254

Aroclor-1260

ND

ND

ND

^{*} EPA has not yet determined detection limits for these compounds.

Matrix: Soil

Date Received: January 27, 1983 Date Reported: March 3, 1988 DATE REISSUED: March 10, 1988

P.O. No.

Job No. : AT077

FOR: ES:Atlanta/Colk Field ANGB

Address 57 Executive Park 3.E., Suite 590

Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

880191 Lab Number

Sample No. UF1 B-1 3S-2, 3.5'

Date Sampled: 1-26-88 Time Sampled: 310 Date Extracted: 2-1-88 Date Analyzed:

Detection ANALYTICAL RESULTS Compound Limits mg/kg mg/kg ______ 6 6 2-Chlorophenol ND 2-Nitrophenol 6.6 ND 6.6 ND Phenol 2,4-Dimethylphenol 2,4-Dichlorophenol 6.6 ND 2,4-Dichlorophenol 6.6 2,4,6-Trichlorophenol 6.6 4-Chloro-3-methylphenol 13 ND ND ND 2,4-Dinitrophenol 33 ND 2,6-Dichlaraphenal ND 2-Methyl-4,6-Dinitrophenol 33 ND Pentachlorophenol 33 ND 4-Nitrophenol 33 ND Benzoic Acid 33 ND 2-Methylphenol 6.6 ND 3- & 4-Methylphenol 6.6 ND 2,3,4,6-Tetrachlorophenol --* ND 6.6 ND 2,4,5-Trichlorophenol

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE Sample(s) No.: 88010186-0199 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

Date Received: January 27, 1988 Date Reported: March 3, 1988

DATE REISSUED: March 10,1988

ATTN: Mr. Jim Duncan

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329

980192 Lab Number UF1 B-1 3S-3, 3.5 Sample No : Date Sampled: 1-26-38 940 Time Sampled: 2-1-88 Date Extracted: 2-12-98 Date Analyzed:

Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg _____ 1,3-Dichlorobenzene 6.6
1,4-Dichlorobenzene 6.6
Hexachloroethane 6.6
Bis(2-chloroethyl)ether 6.6
1,2-Dichlorobenzene 6.6
N-Nitrosodimethylamine 25 ND ND ND ND ND ND ND Bis(2-chloroisopropyl)ether 6.6 ND N-Nitrosodi-n-propyl amine 6.6 Hexachlorobutadiene 6.6 1,2,4-Trichlorobenzene 6.6 Nitrobenzene ND ND Nitrobenzene 6.6 ND 6.6 ND Isophorone 7.3 6.6 Naphthalens Bis(2-chloroethoxy)methane 6.6 ND 2-Chloronaphthalene 6.6
Hexachlorocyclopentadiene 6.6
Acenaphthylene 6.6
Acenaphthene 6.6 ND ND ND ND Acenaphthene Dimethyl phthalate 6.6 ND 6.6 ND 2,6-Dinitrotoluene 6.6 ND Fluorene 2,4-Dinitrotoluene 6.6
Diethyl phthalate 6.6
N-Nitrosodiphenylamine 6.6
Hexachlorobenzene 6.6 ND ND ND ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: January 27, 1988
Date Reported: March 3, 1988
DATE REISSUED: March 10, 1988

P.O. No.: Job No. : AT077

ATTN: Mr. Jim Duncan

FOR: ES:Atlanta/Uolk Field ANGB Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880192 Lab Number:

OF1 B-1 SS-3, 8.51 Sample No.:

Date Sampled: 1-26-38 940 Time Sampled: 2-1-88 Date Extracted: Date Analyzed:

Compound Detection ANALYTICAL RESULTS Limit mg/kg mg/kg ______ 6.6 Phenanthrene Anthracene ND 6.6 ND Dibutyl phthalate 6.6 ND ND Fluoranthene 6.6 4-Chlorophenyl phenyl ether 6.6 ND ND 6.6 Butyl Benzyl phthalate 6.6 ND Bis(2-ethylhexyl) phthalate 6.6 ND ND 6.6 4-Bromophenyl phenyl ether 6.6 ND Benzo(a)anthracene 6.6 Di-n-octylphthalate 6.6 ND ND Benzo(b)fluoranthene 6.6 ND Benzo(k)fluoranthene 6.6 ND 60 ND Benzidine

3,3'-Dichlorobenzidine

Benzo(a)pyrene

Indeno(1,2,3-cd)pyrene

Dibenzo(a,h)anthracene

6.6

Benzo(ah)nerulene

6.6 Benzidine ND ND ND ND Benzo(ghi)perylene ND 6.6 Benzyl Alcohol 13 ND

Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil (continued)

 Date Received:
 January 27, 1988
 P.O. No.:

 Date Reported:
 March 3, 1988
 Job No.: AT077

 DATE REISSUED:
 March 10, 1988

Page 3 of 5

For: ES:Atlanta/Oolk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

 Lab Number:
 880192

 Sample No.:
 UF1 B-1 SS-3, 8.5°

 Date Sampled:
 1-26-88

 Time Sampled:
 940

 Date Extracted:
 2-1-88

 Date Analyzed:
 2-12-88

Compound Analytical Results Detection Limits mg∕kg mg/kg Acetophenone ND --* Aniline ND 4-Aminobiphenyl --* ND 4-Chloroaniline 13 ND 1-Chloronaphthalene ND p-Dimethylaminoazobenzene --*
7,12-Dimethylbenzene ND ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenylamine ND 1,2-Diphenylhydrazine ND Ethyl methanesulfonate ND 3-Methylcholanthrene ND Methyl methanesulfonate ND 3-Methylcholanthrene 2-Methylnaphthalene ND 6.6 14 --* ND l-Naphthylamine 2-Naphthylam 2-Nitroaniline 3-Nitroaniline 2-Naphthylamine --* ND 33 ND 33 ND ND N-Nitroso-di-n-butylamine ND N-Nitrosopiperidine ND Pentachlorobenzene ND Pentachloronitrobenzene ND ND Phenacetin 2-Picoline ND ND Pronamide --* 1,2,4,5-Tetrachlorobenzene --*

^{*}EPA has not yet determined detection limits for these compounds

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 27, 1988 Date Reported: March 3, 1988 DATE REISSUED: March 10, 1988

ATTN:Mr. Jim Duncan ES:Atlanta/Volk Field ANGB

Address 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329

Lab Number:	980192
Sample No.:	UF1 B-1 3S-3, 3.5'
Date Sampled:	1-26-88
Time Sampled:	940
Pate Extracted:	2-1-88
Date Analyzed:	2-12-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg∕kg
Alpha-BHC	*	ND
Gamma-BHC	*	ND
Beta-BHC	4	ND
Heptachlor	4 2 3 2 2	ND
Delta-BHC	3	ND
Aldrin	2	ND
Heptachlor epoxide	2	ND
Endosulfan I	*	ND
Dieldrin	3	ND
4,4'-DDE	6	ND
Endrin	+	ND
Endosulfan II	*	ND
4,4'-DDD	3	ND
4,4'-DDT	3 5 6	ND
Endosulfan Sulfate	6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	40	ND
Methoxychlor	*	ND
Toxaphene	40	ND
Aroclor-1016	40	ND
Aroclor-1221	40	ND
Aroclor-1232	40	ND
Aroclor-1242	40	ND
Aroclor-1248	40	ND
Aroclor-1254	40	ND
Aroclor-1260	40	ND

^{*} EPA has not yet determined detection limits for these compounds.

Matrix: Soil

Date Received: January 27, 1988 Date Reported: March 3, 1988

DATE REISSUED: March 10, 1988

P.O. No. 1 Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number 880192 Sample No. UF1 B-1 SS-3, 8.5°

Date Sampled: 1-26-38 Time Sampled: 940 Date Extracted: 2-1-88 Date Analyzed: 2-12-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg∕kg	mg/kg
2-Chlorophenol	6.6	ND
2-Nitrophenol	6.6	ND
Phenol	6.6	ND
2,4-Dimethylphenol	6.6	ND
2,4-Dichlorophenol	6.6	ND
2,4,6-Trichlorophenol	6.6	ND
4-Chloro-3-methylphenol	13	ND
2,4-Dinitrophenol	33	ND
2,5-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 33	ND
Pentachlorophenol	33	ND
4-Nitrophenol	33	ND
Benzoic Acid	33	ND
2-Methylphenol	6.6	ND
3- & 4-Methylphenol	6 . 6	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	6.6	ND

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE Sample(s) No.: 88010186-0139 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Detection	ANALYTICAL RESULTS
	2-9-88
	2-1-88
	1040
	1-26-88
	UF1 B-2 SS-1, 0.5'
	880193

	imits g/kg	mg/kg	
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.66	ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ethe		ND	
N-Nitrosodi-n-propyl amine		ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)methane		ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate:	0.66	ND	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	
****************	0.00	• • •	

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: January 27, 1988 Date Reported: March 3, 1988

P.O. No.:

Job No. : AT077

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880193

Sample No.: UF1 B-2 SS-1, 0.5'

Date Sampled: 1-26-88 Time Sampled: 1040 Date Extracted: 2-1-88

Date Analyzed: 2-9-88

Compound D	etection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	U.66	ND
4-Chlorophenyl phenyl eth	er 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthala	te 0.66	ND
Chrysene	0.6 6	ND
4-Bromophenyl phenyl ethe	r 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene		ND
Benzo(ghi)perylene	0.66	ND .
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270

Page 3 of 5

Matrix: Soil (continued)

 Date Received:
 January 27, 1988
 P.O. No.:

 Date Reported:
 March 3, 1988
 Job No.: AT077

For ES:Atlanta/Oolk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 980193

Sample No.: VF1 B-2 SS-1, 0.5

 Date Sampled:
 1-26-88

 Time Sampled:
 1040

 Date Extracted:
 2-1-88

 Date Analyzed:
 2-9-88

Compound Detection Analytical Results Limits mg/kg mg/kg Acetophenone Aniline
4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene Aniline --* ND --* ND 1.3 ND __★ ND Dibenzofuran 0.66 ND p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND ND Diphenylamine 1,2-Diphenylhydrazine ND Ethyl methanesulfonate 3-Methylcholanthrene ND ND Methyl methanesulfonate ND 3-Methylcholanthrene
2-Methylnaphthalene
1-Naphthylamine
2-Naphthylamine
2-Nitroaniline
3-Nitroaniline
4-Nitroaniline --* ND 0.66 ND --* ND --* ND 3.3 ND 3.3 ND 3.3 ND N-Nitroso-di-n-butylamine --* ND N-Nitrosopiperidine ND Pentachlorobenzene ND Pentachloronitrobenzene ND Phenacetin ND 2-Picoline --* ND --* ND Pronamide 1,2,4,5-Tetrachlorobenzene ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

page 4 of 5

Date Received: January 27, 1988 P.O. No.:
Date Reported: March 3, 1988 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880193

Sample No.: UF1 B-2 SS-1, 0.5'

Date Sampled:1-26-88Time Sampled:1040Date Extracted:2-1-88Date Analyzed:2-9-88

Compound Betection ANALYTICAL RESULTS Limits mg/kg mg/kg Alpha-BHC ND __* Gamma-BHC ND 0.4 Beta-BHC ND Heptachlor Delta-BHC 0.2 ND 0.3 ND 0.2 Aldrin ND Heptachlor epoxide Endosulfan I 0.2 ND Endosulfan I ND 0.3 ND Dieldrin 4,4'-DDE 0.6 ND Endrin ND Endosulfan II --* ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde ND --* Endrin Ketone ND Chlordane 4.0 ND --* Methoxychlor ND 4.0 Toxaphene ND Aroclor-1016 4.0 ND Aroclor-1221 4.0 ND Aroclor-1232 4.0 ND 4.0 Aroclor-1242 ND Aroclor-1248 4.0 ND Aroclor-1254 4.0 ND Aroclor-1260 4.0 ND

^{*} EPA has not yet determined detection limits for these compounds.

January 27, 1988 Date Received:

P.O. No.:

Date Reported: March 3, 1988

Job No. : AT077

ES: Atlanta / Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880193

Sample No.:

UF1 B-2 SS-1, 0.5'

Date Sampled: Time Sampled:

1-26-88 1040

Date Extracted: . Date Analyzed:

2-1-88 2-9-88

Compound	Detection Limits	ANALYTICAL RESULTS	
	mg/kg	mg/kg	
2-Chlorophenol	0.66	ND	
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	
2,4-Dimethylphenol	U.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenol	3.3	' ND	
2,6-Dichlorophenol	*	ND	
2-Methyl-4,6-Dinitropheno	1 3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3.3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND	
2,3,4.6-Tetrachlorophenol	*	ND	
2,4,5-Trichlorophenol	0.66	ND	

*EPA has not yet determined detection limits for these compounds.

NOTE Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE Sample(s) No.: 88010186-0199 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 27, 1988 Date Reported: March 3, 1988

P.O. No.: Job No. : AT077

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880194

UF1 B-2 SS-2, 3.5 Sample No.:

Date Sampled: 1-26-38 Time Sampled: 1110 Date Extracted: 2-1-88 Date Analyzed: 2-9-88

п	g/kg	mg/kg	
l,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.66	ND	
Héxachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ethe	r 0.66	ND	
N-Nitrosodi-n-propyl amine		ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)methane	0.66	ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	ND	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Disthyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

 Date Received:
 January 27, 1988
 P.O. No.:

 Date Reported:
 March 3, 1988
 Job No.:
 AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880194

Sample No.: UF1 B-2 SS-2, 3.5

 Date
 Sampled:
 1-26-88

 Time
 Sampled:
 1110

 Date
 Extracted:
 2-1-88

 Date
 Analyzed:
 2-9-88

Compound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	ນ . 66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl et		ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	DO
Bis(2-ethylhexyl) phthal	late 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl eth	ner 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil (continued)

Date Received: January 27, 1988 Date Reported: March 3, 1988

P.O. No.:

Job No. : AT077

ES: Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Page 3 of 5

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880194

VF1 B-2 SS-2, 3.5 Sample No.:

Date Sampled: 1-26-88 Time Sampled: 1110 Date Extracted: 2-1-88 Date Analyzed: 2-9-88

Compound Detection Analytical Results Limits mg/kg mg/kg Acetophenone Aniline --* ND 4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene ND 1.3 ND --* ND Dibenzofuran 0.66 ND p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenylamine ND 1,2-Diphenylhydrazine ND Ethyl methanesulfonate ND 3-Methylcholanthrene ND Methyl methanesulfonate --* ND 3-Methylcholanthrene ND 2-Methylnaphthalene 0.66 ND --* 1-Naphthylamine ND 2-Naphthylamine --* ND 3.3 2-Nitroaniline ND 3-Nitroaniline 3.3 ND 4-Nitroaniline 3.3 ND N-Nitroso-di-n-butylamine --* ND N-Nitrosopiperidine ND Pentachlorobenzene --* ND Pentachloronitrobenzene ND Phenacetin ND 2-Picoline ND Pronamide ND 1,2,4,5-Tetrachlorobenzene ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 3270 Matrix: Soil

Date Received: January 27, 1988
Date Reported: March 3, 1988 P.O. No.: Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329

Compound

3.5

Time Sampled: 1110 Date Extracted: 2-1-88 Date Analyzed: 2-9-88

•	Limits mg/kg	mg/kg	
Alpha-BHC	*	ND	
Gamma-BHC	*	ND	
Beta-BHC	Û . 4 .	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	*	ND	
Dieldrin	υ. 3	ND '	
4,4'-DDE	0.6	ND	
Endrin	*	ND	
Endosulfan II	*	ND	
4,4'~DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	*	ND	
Endrin Ketone	*	ND	
Chlordane	4.0	ND	
Methoxychlor	*	ND	
Toxaphene	4.0	ND	
Aroclor-1016	4.0	ND	
Aroclor-1221	4.0	ND	
Aroclor-1232	4.0	ND	
Aroclor-1242	4.0	ND	
Aroclor-1248	4.0	ND	
Aroclor-1254	4.0	ND	
Aroclor-1260	4.0	ND	

Detection ANALYTICAL RESULTS

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: January 22, 1988

Date Reported: March 3, 1988

P.O. No.:

Job No. : AT077

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880194

Sample No.: UF1 B-2 SS-2, 3.5

Date Sampled: 1-26-88 Time Sampled: 1110 2-1-88 Date Extracted: Date Analyzed: 2-9-88

Compound	etection Limits	ANALYTICAL RESULTS	
	mg/kg	mg/kg	
2-Chlorophenol	0.66	ND	
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	
2,4-Dimethylphenol	0.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenol	3.3	ND	
2,6-Dichlorophenol	*	ND	
2-Methyl-4,6-Dinitropheno	1 3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3.3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND .	
2,3,4,6-Tetrachlorophenol		ND	
2,4,5-Trichlorophenol	0.66	ND	

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 27, 1988 P.O. No.:

Date Reported: March 3, 1988 Job No. : AT077

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329

Date Analyzed:

Lab Number . 880195

UF1 B-2 SS-3, 8.5 Sample No :

Pate Sampled: 1-26-88 Time Sampled: 1145 Date Extracted: 2-1-88 2-9-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Héxachloroethane	J.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)e	ther 0.66	ND
N-Nitrosodi-n-propyl am		ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)meth	name 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadie	ne 0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: January 27, 1988 Date Reported: March 3, 1988 FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880195

Sample No.: UF1 B-2 SS-3, 8.5

 Date Sampled:
 1-26-88

 Time Sampled:
 1145

 Date Extracted:
 2-1-88

 Date Analyzed:
 2-9-88

Compound De	tection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ethe	er 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalat	. 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	. 0.66	ND
Benzo(a)anthracene		ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene		ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene		ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Page 3 of 5

Matrix: Soil (continued)

 Date Received:
 January 27, 1988
 P.O. No.:

 Date Reported:
 March 3, 1988
 Job No.: AT877

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 37 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880195

Sample No.: UF1 B-2 SS-3, 8.5'

 Date Sampled:
 1-26-88

 Time Sampled:
 1145

 Date Extracted:
 2-1-88

 Date Analyzed:
 2-9-88

Compound Detection Analytical Results Limits mg/kg mg/kg Acetophenone --* ND --* ND Aniline 4-Aminobiphenyl 4-Chloroaniline ND 1.3 ND 1-Chloronaphthalene ND Dibenzofuran 0.66 ND p-Dimethylaminoazobenzene ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenulamine ND 1,2-Diphenylhydrazine ND Ethyl methanesulfonate ND 3-Methylcholanthrene ND Methyl methanesulfonate ND 3-Methylcholanthrene ND 2-Methylnaphthalene 0.66 ND --* 1-Naphthylamine ND 2-Naphthylamine ND 2-Nitroaniline 3.3 ND 3-Nitroaniline 3.3 ND 3.3 4-Nitroaniline ND ND N-Nitroso-di-n-butylamine N-Nitrosopiperidine ND Pentachlorobenzene ND Pentachloronitrobenzene ND ND Phenacetin 2-Picoline ND Pronamide ND 1,2,4,5-Tetrachlorobenzene ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 27, 1988 P.O. No.: Date Reported: March 3, 1988 Job No. : AT022 FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 Lab Number: 880195 UF1 B-2 SS-3, 8.5' Sample No.: Date Sampled: 1-26-88 Time Sampled: 1145 2-1-88 Date Extracted: Date Analyzed: 2-9-88 Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg Alpha-BHC Gamma-BHC ND 0.4 ND Beta-BHC ND 0.2 Heptachlor Delta-BHC ND 0.3 ND Aldrin 0.2 ND Heptachlor epoxide 0.2 ND Endosulfan I Dieldrin 4,4'-DDE --* ND 0.3 ND 0.6 ND --* Endrin ND Endosulfan II --* ND 0.3 4,4'-DDD ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde ND Endrin Ketone --* ND Chlordane Methoxychlor 4.0 ND --* ND 4.0 Toxaphene ND 4.0 4.0 4.0 Aroclor-1016 ND Aroclor-1221 ND Aroclor-1232 ND

4.0

4.0

4.0

4.0

Aroclor-1242

Aroclor-1248

Aroclor-1254

Aroclor-1260

ND

ND

ND

ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: January 27, 1988 Date Reported: March 3, 1988 P.O. No.:

Job No : AT077

FOR: ES:Atlanta/Uolk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880195

Sample No.: UF1 B-2 SS-3, 8.5'

Date Sampled: 1-26-88
Time Sampled: 1145
Date Extracted: 2-1-88

Date Analyzed: 2-9-88

	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenal	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

Mia A Leg

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE Sample(s) No.: 88010186-0199 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received:

January 27, 1988

Date Reported: March 3, 1988

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880196

UF1 B-3 SS-1 1.0' Sample No.:

Date Sampled: 1-26-88 Time Sampled: 1210 Date Extracted: 2-1-88 Date Analyzed: 2-9-88

mg/kg	1	etection Limits	ANALYTICAL RESULTS
1,4-Dichlorobenzene 0.66 ND Hexachloroethane 0.66 ND Bis(2-chloroethyl)ether 0.66 ND 1,2-Dichlorobenzene 0.66 ND N-Nitrosodimethylamine 2.5 ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND		ng/kg	mg/kg
1,4-Dichlorobenzene 0.66 ND Hexachloroethane 0.66 ND Bis(2-chloroethyl)ether 0.66 ND 1,2-Dichlorobenzene 0.66 ND N-Nitrosodimethylamine 2.5 ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND 2-Chloroaphthalene 0.66 ND 2-Chloroaphthalene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND	1,3-Dichlorobenzene	0.66	ND
Hexachloroethane 0.66 ND Bis(2-chloroethyl)ether 0.66 ND 1,2-Dichlorobenzene 0.66 ND N-Nitrosodimethylamine 2.5 ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND N-Nitrobenzene 0.66 ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Nitrobenzene 0.66 ND Lsophorone 0.66 ND ND Haphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthylene 0.66 ND Dimethyl phthalate 0.66 ND Dimethyl phthalate 0.66 ND C,6-Dinitrotoluene 0.66 ND		0.66	ND
1,2-Dichlorobenzene 0.66 ND N-Nitrosodimethylamine 2.5 ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND Pachloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND	•	0.66	ND
1,2-Dichlorobenzene 0.66 ND N-Nitrosodimethylamine 2.5 ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND	Bis(2-chloroethyl)ether	0.66	ND
N-Nitrosodimethylamine 2.5 ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND Dimethyl phthalate 0.66 ND Fluorene 0.66 ND		0.66	ND
Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND		2.5	ND
N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND Naphthalene 0.66 ND 2-Chloronethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND		er 0.66	ND
Hexachlorobutadiene 0.66 ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND			ND
1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND			ND
Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND			ND
Naphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND			ND
Naphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND	Isophorone	0.66	ND
Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Conaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND		0.66	ND
2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND		e 0.66	ND
Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND			ND
Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND		0.66	ND
Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND		0.66	ND
Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND		0.66	ND
2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND		0.66	ND
Fluorene 0.66 ND		0.66	ND
2,4-Dinitrotoluene 0.66 ND	-	0.66	ND
,	2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate 0.66 ND			ND
N-Nitrosodiphenylamine 0.66 ND			ND
Hexachlorobenzene 0.66 ND			ND

page 2 of 5

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Date Received: January 27, 1988 Date Reported: March 3, 1988

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:	880196
Sample No.:	UF1 B-3 SS-1 1.0'
Date Sampled:	1-26-88
Time Sampled:	1210
Date Extracted:	2-1-88
Date Analyzed:	2-9-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl et	her 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthal	ate 0.66	ND
Chrysene	0.6 6	ND
4-Bromophenyl phenyl eth	er 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	NĎ
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ИD

Priority Pollutant Analysis Base Neutrals - SW 8270

Page 3 of 5

Matrix: Soil (continued)

Date Received: January 27, 1988 P.O. No.: Date Reported: March 3, 1988 Job No. : AT077 For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan Address:57 Executive Park S.E., Suite \$90

.

Atlanta, Georgia 30329

1,2,4,5-Tetrachlorobenzene

Lab Number: 880196 Sample No.: UF1 B-3 SS-1 1.0' Date Sampled: 1-26-38 Time Sampled: 1210 Date Extracted: 2-1-88 Date Analyzed: 2-9-88

Compound Detection Analytical Results Limits mg/kg mg/kg --* Acetophenone ND Aniline --* ND 4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene _-* ND 1.3 ND --* ND 0.66 Dibenzofuran ND p-Dimethylaminoazobenzene ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenulamine ND 1,2-Diphenylhydrazine ND Ethyl methanesulfonate --* ND 3-Methylcholanthrene --* ND Methyl methanesulfonate ND 3-Methylcholanthrene --* ND 2-Methylnaphthalene 0.66 ND 1-Naphthylamine ND 2-Naphthylamine ND 2-Naphvilla 2-Nitroaniline 3.3 ND 3.3 ND 3-Nitroaniline 3.3 4-Nitroaniline ND N-Nitroso-di-n-butylamine ND N-Nitrosopiperidine ND Pentachlorobenzene ND Pentachloronitrobenzene --* ND Phenacetin ND 2-Picoline --* ND --* Pronamide ND

ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Address 57 Executiv	ch 3, 1988 Volk Field ANGB	P.O. No.:
Lab Number: Sample No : Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		380196 UF1 B-3 SS-1 1.0' 1-26-88 1210 2-1-88 2-9-88
Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
Alpha-BHC Gamma-BHC Beta-BHC Heptachlor Delta-BHC Aldrin Heptachlor epoxide Endosulfan I Dieldrin 4,4'-DDE Endrin Endosulfan II 4,4'-DDD 4,4'-DDT Endosulfan Sulfate Endrin aldehyde Endrin Ketone	** 0.4 0.2 0.3 0.2 0.2* 0.3 0.6** 0.3 0.5	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Chlordane Methoxychlor Toxaphene Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248	4.0 * 4.0 4.0 4.0 4.0 4.0	D

4.0

4.0

Aroclor-1254

Aroclor-1260

ND

ND

^{*} EPA has not yet determined detection limits for these compounds.

Date Received: January 27, 1988

Date Reported: March 3, 1988

-

FOR: ES: Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880136

Sample No.: UF1 B-3 SS-1 1.0'

Date Sampled: 1-26-88
Time Sampled: 1210
Date Extracted: 2-1-88
Date Analyzed: 2-9-88

Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg ------0.66 2-Chlorophenol 2-Nitrophenol 0.66 ND Phenol 0.66 ND 2,4-Dimethylphenol 0.66 ND ND 2,4-Dichlorophenol 0.66 2,4,6-Trichlorophenol 0.66 ND 4-Chlora-3-methylphenol 1.3 ND 2,6-Dichlorophenol ND 3.3 ND ND 2-Methyl-4,6-Dinitrophenol 3.3 Pentachlorophenol 3.3 ND 3.3 ND 4-Nitrophenol 3.3 ND Benzoic Acid 2-Methylphenol 0.66 ND 3- & 4-Methylphenol 0.66 ND 2,3,4,6-Tetrachlorophenol --* ND 2,4,5-Trichlorophenol ND

Analyst Vug

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010178 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Matrix: Soi

Date Received: January 27, 1988 P.O. No.:

Date Reported: March 3, 1988 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Pate Analyzed:

Lab Number: 880197

Sample No.: UF1 B-3 SS-2 3.5'

 Date Sampled:
 1-26-88

 Time Sampled:
 1250

 Date Extracted:
 2-1-88

2-9-88

	ANALYTICAL	RESULTS
g/kg	mg/l	kg
0.66	ND	
2.5	ND	
r 0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
0.66	ND	
	0.6666 0.6666 0.566666666666666666666666	Timits

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Date Received: January 27, 1988 Date Reported: March 3, 1988

Job No : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880197

Sample No.: UF1 B-3 SS-2 3.5'

Date Sampled: 1-26-88 Time Sampled: 1250 Date Extracted: 2-1-88 Date Analyzed. 2-9-88

	tection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ethe	r 0.66	ND
Pyrene	ø.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalat	e 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND '
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

(continued)

Date Received: January 27, 1988 P.O. No.: Job No. : AT077 Date Reported: March 3, 1988

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590 Atlanta, Georgia 3 29

880197 Lab Number:

UF1 B-3 SS-2 3.51 Sample No.

Date Sampled: 1-26-38 Time Sampled: 1250 2-1-88 Date Extracted: 2-9-88 Date Analyzed:

Compound	Detection Limits	Analytical	Results
	mg/kg	mg/kg	
Acetophenone	*	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	1.3	ND	
1-Chloronaphthalene	*	ND	
Dibenzofuran	0.66	ND	
p-Dimethylaminoazobenzene	*	ND	·
7,12-Dimethylbenz(a)anthra	icene*	ND	
a-,a-Dimethylphenethylamir		ND	
Diphenylamine	*	ND	
1,2-Diphenylhydrazine	*	ND	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	0.66	ND	
l-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	3.3	ND	
3-Nitroaniline	3 .3	ND	
4-Nitroaniline	3.3	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ИD	
1,2,4,5-Tetrachlorobenzene	9*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

FOR: ES:Atlanta/Uolk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Aroclor-1232

Aroclor-1242

Aroclor-1248

Aroclor-1254

Aroclor-1260

Lab Number: Sample No.: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		880197 UF1 B-3 SS-2 3 5' 1-26-88 1250 2-1-88 2-9-88
Compound	Detection Limits mg∕kg	ANALYTICAL RESULTS
Alpha-BHC		ND
Gamma-BHC	*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND ·
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND

4.0

4.0

4.0

4.0

4.0

ND

ND

ND

ND

ND

^{*} EPA has not yet determined detection limits for these compounds.

Date Received:

January 27, 1988

P.O. No.:

Date Reported: March 3, 1988

Job No. : AT077

FOR: ES:Atlanta/Uolk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880197

Sample No.:

UF1 B-3 SS-2 3.5'

ND

ND

Date Sampled: Time Sampled:

1-26-38 1250

Date Extracted: Date Analyzed:

2-1-88 2-9-88

Compound	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND

0.66

2,3,4,6-Tetrachlorophenol --*

2,4,5-Trichlorophenol

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned NOTE: to client or disposed of at client expense.

CASE NARRATIVE Sample(s) No.: 88010186-0199 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 27, 1988 Date Reported: March 3, 1988

P.O. No.: Job No. : AT077

ES:Atlanta/Uolk Field ANGB Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880186

Sample No.: UF1 B-3 SS-3, 8.5'

Date Sampled: 1-26-88 Time Sampled: 1405 Date Extracted: 2-1-88 Date Analyzed: 2-8-88

______ ANALYTICAL RESULTS Compound Detection

Limits mg/kg mg∕kg ND

1,3-Dichlorobenzene 0.66
1,4-Dichlorobenzene 0.66
Hexachloroethane 0.66
Bis(2-chloroethyl)ether 0.66
1,2-Dichlorobenzene 0.66
N-Nitrosodimethylamine 2.5 ND ND ND ND ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 Hexachlorobuţadiene 0.66 ND ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND 0.66 0.66 ND Isophorone ND Naphthalene Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene
Acenaphthene
Dimethyl phthalate
2,6-Dinitrotoluene 0.66 ND 0.66 ND 0.66 0.66 ND ND Fluorene 0.66 ND 2,4-Dinitrotoluene 0.66
Diethyl phthalate 0.66
N-Nitrosodiphenylamine 0.66
Heyachlorobenzene 0.66 ND ND ND Hexachlorobenzene 0.66 ND

ATTN: Mr. Jim Duncan

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: January 27, 1988 Date Reported: March 3, 1988

Job No. : ATUZZ

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

380186 Lab Number:

UF1 B-3 3S-3, 8.5 Sample No.:

Tate Sampled: 1-26-88 Time Sampled: 1405 Date Extracted: 2-1-88 Date Analuzed: 2-8-38

	2-0-00	
ection imit	ANALYTICAL RESULTS	
g/kg	mg/kg	
0.66	ND	
	ND	
6.0	ND	
1.3	ND	
	ND	
1.3	ND	
	mit g/kg 0.66 0.66 0.66 0.66 0.66 0.66 0.66 0.6	ection ANALYTICAL RESULTS imit g/kg mg/kg 0.66 ND

(continued)

Date Received: January 27, 1988 P.O. No. March 3, 1988 Job No. : AT077

Date Reported:

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880186

Sample No : VF1 B-3 SS-3, 8.5'

Date Sampled: 1-26-88 Time Sampled: 1405 Date Extracted: 2-1-38 Date Analyzed: 2-8-88

Compound	Detection Limits	Analytical	Results
	mg/kg	mg/kg	
Acetophenone	*	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	1.3	ND	
1-Chloronaphthalene	*	ND	
Dibenzofuran	0.66	ND	
p-Dimethylaminoazobenzene	*	ND	
7,12-Dimethylbenz(a)anthra	cene*	ND	
a-,a-Dimethylphenethylamin	e*	ND	
Diphenylamine	*	ND	
1,2-Diphenylhydrazine	 ★	ND	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ПN	
Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	0.66	ND	
1-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	3.3	ND	
3-Nitroaniline	3.3	ND	
4-Nitroaniline	3.3	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzene	*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 27, 1988 Date Reported March 3, 1988 FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 Lab Number: 880186 UF1 B-3 SS-3, 8.51 Sample No.: Date Sampled: 1-26-88 Time Sampled: 1405 2-1-38 Date Extracted: Date Analyzed: _____ Compound Detection ANALYTICAL RESULTS Limits mg∕kg mg/kg Alpha-BHC Gamma-BHC ND 0.4 ND Beta-BHC Heptachlor ND Delta-BHC 0.3 ND 0.2 ND Aldrin 0.2 ND Heptachlor epoxide ND Endosulfan I 0.3 Dieldrin ND 4,4'-DDE 0.6 ND --* Endrin ND Endosulfan II --* ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde --* ND Endrin Ketone ND

4.0

--**★**

4.0

4.0

4.0

4.0

4.0

4.0

4.0

Chlordane Methoxychlor

Toxaphene

Aroclor-1016

Aroclor-1221

Aroclor-1232

Araclar-1242

Aroclor-1248 Aroclor-1254

Aroclor-1260

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Pate Received: January 27, 1988 P. Date Reported: March 3, 1988 Jo

FOR: ES:Atlanta/Oolk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 980186

Sample No.: UF1 B-3 SS-3, 8.5'

 Date Sampled:
 1-26-88

 Time Sampled:
 1405

 Date Extracted:
 2-1-88

 Date Analyzed:
 2-8-88

Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg 0.66 2-Chlorophenol 2-Nitrophenol 0.66 ND 0.66 Phenol ND 2,4-Dimethylphenol 2,4-Dichlorophenol 0.66 ND 0.66 ND 2,4,6-Trichlorophenol 0.66 ND 4-Chloro-3-methylphenol 1.3 ND 2,4-Dinitrophenol 3.3 ND 2,6-Dichlorophenol ND 2-Methyl-4,6-Dinitrophenol 3.3 ND Pentachlorophenol 3.3 ND 3.3 4-Nitrophenol ND Benzoic Acid 3.3 ND 2-Methylphenol 0.66 ND 3- & 4-Methylphenol 0.66 ND 2,3,4,6-Tetrachlorophenol --* ND 2,4,5-Trichlorophenol 0.66 ND

Aug / Vuge

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE Sample(s) No.: 88010186-0199 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

Date Received: January 27, 1988

P.O. No.:

Date Reported: March 3, 1988

Job No. : AT077

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880189

UF1 B-4 SS1, 0.5 Sample No.:

Date Sampled: 1-26-88 Time Sampled: 1430 Date Extracted: 2-1-88 Date Analyzed: 2-16-88

-----Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg 1,3-Dichlorobenzene 33
1,4-Dichlorobenzene 33
Hexachloroethane 33
Bis(2-chloroethyl)ether 33
1,2-Dichlorobenzene 33
N-Nitrosodimethylamine 130 ND ND ND ND ND ND Bis(2-chloroisopropyl)ether 33 ND N-Nitrosodi-n-propyl amine 33 ND 33 Hexachlorobutadiene ND 1,2,4-Trichlorobenzene 33 ND 33 Nitrobenzene ND 33 Isophorone ND 33 ND Naphthalene Bis(2-chloroethoxy)methane 33 ND 33 ND 2-Chloronaphthalene Hexachlorocyclopentadiene 33 Acenaphthylene 33 ND ND 33 ND Acenaphthene Dimethyl phthalate 33 ND 33 2,6-Dinitrotoluene ND 33 ND Fluorene 33 2,4-Dinitrotoluene ND 33 Diethyl phthalate ND N-Nitrosodiphenylamine 33 ND Hexachlorobenzene 33 ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Date Received: January 27, 1988 Date Reported: March 3, 1988

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590 ATTN: Mr. Jim Duncan

Atlanta, Georgia 30329

Lab Number:	880189
Sample No.	VF1 B-4 SS1, 0.5'
Date Sampled:	1-26-88
Time Sampled:	1430
Date Extracted:	2-1-88
Date Analyzed	2-16-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS mg/kg
	g/	
Phenanthrene	33	ND
Anthracene	33	ND
Dibutyl phthalate	33	ND
Fluoranthene	33	ND
4-Chlorophenyl phenyl etl	ner 33	ND
Pyrene	33	ND
Butyl Benzyl phthalate	33	ND
Bis(2-ethylhexyl) phthal.	ate 33	ND
Chrysene	33	ND
4-Bromophenyl phenyl eth	er 33	ND .
Benzo(a)anthracene	33	ND
Di-n-octylphthalate	33	ND
Benzo(b)fluoranthene	33	ND
Benzo(k)fluoranthene	33	ND
Benzidine	300	ND
3,3'-Dichlorobenzidine	65	ND
Benzo(a)pyrene	33	ND
Indeno(1,2,3-cd)pyrene	33	ND
Dibenzo(á,h)anthracene	33	ND
Benzo(ghi)perylene.	33	ND
Benzyl Alcohol	65	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Page 3 of 5

(continued)

Date Received: January 27, 1988 P.O. No.: Job No. : AT077 Date Reported: March 3, 1988

For: ES: Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880189

UF1 B-4 SS1, 0.5' Sample No :

1-26-88 Date Sampled: 1430 Time Sampled: 2-1-88 Date Extracted: 2-16-88 Date Analyzed:

Detection Analytical Results Compound Limits mg/kg mg/kg ______ Acetophenone --* Aniline --* ND 4-Aminobiphenyl
4-Chloroaniline
65
1-Chloronaphthalene
33 ND ND ND 33 ND Dibenzofuran p-Dimethylaminoazobenzene --* ND ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* Diphenylamine ND ND 1,2-Diphenylhydrazine _-* ND Ethyl methanesulfonate 3-Methylcholanthrene ND --* Methyl methanesulfonate ND 3-Methylcholanthrene ND _-* 2-Methylnaphthalene 33 ND --* ND 1-Naphthylamine --* ND 2-Naphthylamine 160 ND 2-Nitroaniline 160 ND 3-Nitroansline ND 4-Nitroaniline 160 ND N-Nitroso-di-n-butylamine --* --* ND N-Nitrosopiperidine ND Pentachlorobenzene --* ND Pentachloronitrobenzene ND Phenacetin ND 2-Picoline --* ND Pronamide ND 1,2,4,5-Tetrachlorobenzene --*

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 27, 1988
Date Reported: March 3, 1988

FOR FC

ES Atlanta/Volk Field ANGB

ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880189
Sample No.: UF1 B-4 SS1, 0.5'
Date Sampled: 1-26-88

Time Sampled: 1430
Date Extracted: 2-1-88
Date Analyzed: 2-16-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
Alpha-BHC	*	ND
Gamma-BHC	_*	ND
Beta-BHC	20	ND
Heptachlor	10	ND
Delta-BHC	15	ND
Aldrin	10	ND
Heptachlor epoxide	10	ND
Endosulfan I	*	ND
Dieldrin	15	ND
4,4'-DDE	30	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	15	ND
4,4'-DDT	25	ND
Endosulfan Sulfate	30	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	200	ND
Methoxychlor	*	ND
Toxaphene	200	ND
Aroclor-1016	200	ND
Aroclor-1221	200	ND
Aroclor-1232	200	ND
Aroclor-1242	200	ND
Aroclor-1248	200	ND
Aroclor-1254	200	ND
Aroclor-1260	200	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270

Matrix: Soil

January 27, 1988 P.O. No.: Date Received:

Date Reported: March 3, 1988 Job No. : AT077

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880189

Sample No.: UF1 B-4 SS1, 0.5'

Date Sampled: 1-26-88 Time Sampled: 1430 -Date Extracted: 2-1-88 Date Analyzed:

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	33	ND
2-Nitrophenol	33	ND
Phenol	33	ND
2,4-Dimethylphenol	33	ND
2,4-Dichlorophenol	33	ND
2,4,6-Trichlorophenol	33	ND
4-Chloro-3-methylphenol	65	ND
2,4-Dinitrophenol	160	ND
2,6-Dichlorophenol	*	ND .
2-Methyl-4,6-Dinitrophen	ol 160	ND
Pentachlorophenol	160	ND
4-Nitrophenol	160	ND
Benzoic Acid	160	DN
2-Methylphenol	33	ND
3- & 4-Methylphenol	33	ND
2,3,4,6-Tetrachloropheno	1*	ND
2,4,5-Trichlorophenol	33	ND

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE Sample(s) No.: 88010186-0199 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

Date Received: January 27, 1988 Date Reported: March 3, 1988 P.O. No.:

Job No. : AT077

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Date Analyzed:

380198 Lab Number:

UF1 B-4 SS 2, 3.5' Sample No :

1-26-88 Date Sampled: Time Sampled: 1530 Date Extracted: 2-1-38 2-9-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)e	ther 0.66	ND
N-Nitrosodi-n-propyl am:		ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)metho	ane 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadie	ne 0.66	ND .
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: January 27, 1988

P.O. No.: Job No. : AT077

Date Reported: March 3, 1988

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880198

Lab Number: Sample No.:

UF1 B-4 SS 2, 3.5'

Date Sampled: Time Sampled: Date Extracted:

Date Analyzed:

1-26-88 1530 2-1-88

2-9-88

Compound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl et	her 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthal	ate 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl eth	ner 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	U.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Page 3 of 5 Base Neutrals - SW 8270 Matrix: Soil

matrix: 5011 (continued)

For: ES:Atlanta/Uolk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880198

Sample No.: UF1 B-4 SS 2, 3.5'

 Date Sampled:
 1-26-88

 Time Sampled:
 1530

 Date Extracted:
 2-1-88

 Date Analyzed:
 2-9-88

Compound Detection Analytical Results Limits mg/kg mg/kg ~ ~ . Acetophenone Aniline
4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene Aniline --* ND --* ND 1.3 ND ND p-Dimethylaminoazobenzene --*
7,12-Dimethulbenz(-ND ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenylamine HD 1,2-Diphenylhydrazine ND Ethyl methanesulfonate
3-Methylcholanthrene ND --* ND Methyl methanesulfonate ND 3-Methylcholanthrene 2-Methylnaphthalene ND 0.66 ND 1-Naphthylamine
2-Naphthylamine
2-Nitroaniline
3-Nitroaniline
4-Nitroaniline --* ND ND 3.3 ND 3.3 ND **3**.3 ND 4-Nitroaniline 3.3 N-Nitroso-di-n-butylamine --* ND N-Nitrosopiperidine Pentachlorobenzene --* ND ND Pentachloronitrobenzene ND Phenacetin ND 2-Picoline ND Pronamide ND 1,2,4,5-Tetrachlorobenzene --* ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 27, 1988 Date Reported: March 3, 1988 FOR: ES Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 Lab Number: 880198 Sample No.: UF1 B-4 SS 2, 3.5' Date Sampled: 1-26-88 Time Sampled: 1530 Date Extracted: 2-1-88 Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg Alpha-BHC 0.4 0.2 Gamma-BHC Beta-BHC ND ND Heptachlor Delta-BHC ND 0.3 ND 0.2 ND Aldrin Heptac lor epoxide Endosulfan I 0.2 ND --* ND 0.3 Dieldrin ND 4,4'-DDE 0.6 ND Endrin ND --* Endosulfan II ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate ND 0.6 Endrin aldehyde ND Endrin Ketone --* ND 4.0 Colordane ND Methoxychlor --* ND 4.0 ND Toxaphene 4.0 Aroclor-1016 ND Aroclor-1221 4.0 ND 4.0 Aroclor-1232 ND 4.0 ND Aroclor-1242 Aroclor-1248 4.0 ND 4.0 ND Aroclor-1254

4.0

Aroclor-1260

ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: January 27, 1988 Date Reported: March 3, 1988

Job No. : AT077

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880198

Sample No. . UF1 B-4 SS 2, 3.5'

Date Sampled: 1-26-88 Time Sampled: 1530 Date Extracted: 2-1-88 Date Analyzed: 2-9-88

•	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Pheno1	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

Date Received: January 27, 1988
Date Reported: March 3, 1988
DATE REISSUED: March 10,1988

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880199

Sample No.: UF1 B-4 SS 3, 8.5'

Date Sampled: 1-26-88 Time Sampled: 1545 Date Extracted: 2-1-88 Date Analyzed: 2-12-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1,3-Dichlorobenzene	6.6	ND
1,4-Dichlorobenzene	6.6	ND
Hexachloroethane	6.6	ND
Bis(2-chloroethyl)ether	6.6	ND
1,2-Dichlorobenzene	6.6	ND
N-Nitrosodimethylamine	25	ND
Bis(2-chloroisopropyl)et	her 6.6	ND
N-Nitrosodi-n-propyl ami	ne 6.6	ND
Hexachlorobutadiene	6.6	ND
1,2,4-Trichlorobenzene	6.6	ND
Nitrobenzene	6.6	ND
Isophorone	6.6	ND
Naphthalene	6.6	ND
Bis(2-chloroethoxy)metha	ne 6.6	ND
2-Chloronaphthalene	6.6	ND
Hexachlorocyclopentadien	e 6.6	ND
Acenaphthylene	6.6	ND
Acenaphthene	6.6	ND
Dimethyl phthalate	6.6	ND
2,6-Dinitrotoluene	6.6	ND
Fluorene	6.6	ND
2,4-Dinitrotoluene	6.6	ND
Diethyl phthalate	6.6	ND
N-Nitrosodiphenylamine	6 . 6	ND
Hexachlorobenzene	6.6	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Reported: March 3, 1988

Date Received: January 27, 1988

P.O. No.: Job No. - AT077

Date Analyzed:

DATE REISSUED: March 10, 1988

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

2-12-88

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880199 Lab Number:

UF1 8-4 SS 3, 8.51 Sample No :

1-26-88 Date Sampled: 1545 Time Sampled: 2-1-88 Date Extracted:

------ANALYTICAL RESULTS Compound Detection

Limit

m	g/kg	mg/kg
Phenanthrene	6.6	ND
Anthracene	5 . 6	ND
Dibutyl phthalate	6.6	ND
Fluoranthene	6.6	ND
4-Chlorophenyl phenyl ether	6∵6	ND
Pyrene	6.6	ND
Butyl Benzyl phthalate	6.6	ND
Bis(2-ethylhexyl) phthalate	ნ.6	ND
Chrysene	6.6	ND
4-Bromophenyl phenyl ether	6.6	ND
Benzo(a)anthraceme	6.6	ND
Di-n-octylphthalate	6.6	ND
Benzo(b)fluoranthene	6.6	ND
Benzò(k)fluoranthene	6.6	ND
Benzidine	60	ND
3,3'-Dichlorobenzidine	13	ND
Benzo(a)pyrene	6.6	ND
Indeno(1,2,3-cd)pyrene	6.6	ND
Dibenzo(a,h)anthracene	6.6	ND
Benzo(ghi)perylana	6.6	ND
Benzyl Alcohol	13	ND

Pate Received: January 27, 1988

Date Received: January 27, 19 Date Reported: March 3, 1988 DATE REISSUED: March 10, 1988

ATTN: Mr. Jim Duncan

Job No. - AT077

For: ES:Atlanta/Volk Field ANGB Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880199

Sample No.: UF1 B-4 SS 3, 3.5'

 Date Sampled:
 1-26-88

 Time Sampled:
 1545

 Date Extracted:
 2-1-88

 Date Analyzed:
 2-12-88

Compound Detection Analytical Results Limits mg/kg mg/kg Acetophenone ND Aniline Aniline 4-Aminobiphenyl ND 13 4-Chloroaniline ND 1-Chloronaphthalene --* ND ND Dibenzofuran p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND ND Diphenulamine 1,2-Diphenylhydrazine ND ND Ethyl methanesulfonate ND 3-Methylcholanthrene ND Methyl methanesulfonate ND 3-Methylcholanthrene --* 2-Methylnaphthalene ND 6.6 1-Naphthylamine ND 2-Naphthylamine ND 33 ND 2-Nitroaniline 33 ND 3-Nitroaniline 33 ND 4-Nitroaniline ND N-Nitroso-di-n-butylamine N-Nitrosopiperidine ND ND Pentachlorobenzene ND Pentachloronitrobenzene ND Phenacetin ND 2-Picoline ND Pronamide 1,2,4,5-Tetrachlorobenzene ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 27, 1988 P.Q. No.: Date Reported: March 3, 1988 DATE REISSUED: March 10, 1988 Job No. : AT077 FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 880199 Lab Number: UF1 B-4 SS 3, 8 5 Sample No. 1-26-88 Date Sampled: 1545 Time Sampled: 2-1-88 Date Extracted: Pate Analyzed: 2-12-88 Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg Alpha-BHC ND Gamma-BHC Beta-BHC ND ND Heptachlor ND 2 Delta-BHC 3 ND ND Aldrin Heptachlor epoxide Endosulfan I ND ND Dieldrin 3 ND 4,4'-DDE Endrin ND ND Endosulfan II 4,4'-DDD 4.4'-DDT ND --* ND 3 5 ND 4,4'-DDT Endosulfan Sulfate ND ND Endrin aldehyde Endrin Ketone ND --* ND Chlordane 40 Methoxychlor ND 40 ND Toxaphene Aroclor-1016 40 ND ND Aroclor-1221 40 ND Aroclor-1232 40 ND Aroclor-1242 40 ND Aroclor-1248 40 ND Aroclor-1254 40

40

Aroclor-1260

ND

^{*} EPA has not yet determined detection limits for these compounds.

Matrix: Soil

Date Received: January 27, 1988 P.O. No.: ...,..... Date Reported: March 3, 1988 Job No : ATU77

DATE REISSUED: March 10, 1988

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 380199

Sample No.: UF1 B-4 SS 3, 8.5"

Date Sampled: Time Sampled: 1-26-88 1545 Date Extracted: 2-1-88 Date Analyzed: 2-12-88

_	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	6.6	ND
2-Nitrophenol	6.6	ND
Phenol	6 . 6	ND
2,4-Dimethylphenol	6.6	ND
2,4-Dichlorophenol	6 - 6	ND
2,4,6-Trichlorophenol	6.6	ND
4-Chloro-3-methylphenol	13	ND
2,4-Dinitrophenol	33	ND
2,6-Dichlorophenol	*	ND .
2-Methyl-4,6-Dinitropheno	1 33	ND
Pentachlorophenol	33	ND
4-Nitrophenol	33	ND
Benzoic Acid	33	ND
2-Methylphenol	6.6	ND
3- & 4-Methylphenol	6.6	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	6.6	ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 28, 1988
Date Reported: February 28, 1988

ATTN: Mr. Jim Duncan

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880209

Sample No.: UF1 B-5 SS1 0'

Date Sampled: 1-27-88 Time Sampled: 1030 2-2-88

Date Extracted: Date Analyzed: 2-22-88

Compound 1	Detection Limits	ANALYTICAL RESULTS	
	mg/kg	mg/kg	
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene		ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether		ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine		ND	
Bis(2-chloroisopropyl)et		ND	
N-Nitrosodi-n-propyl ami		ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene		ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)metha		ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadien		ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	ND	
2,6-Dinitrataluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotaluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine		ND	
77 - 1 1 - 1 - 1 - 1 - 1 - 1 - 1	0.66	ND	

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: January 28, 1988 Date Reported: February 28, 1988

P.O. No.: Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880209 Lab Number:

VF1 B-5 SS1 0' Sample No.:

Date Sampled: 1-27-88 Time Sampled: 1030 Date Extracted: 2-2-88 2-22-88 Date Analyzed:

Compound D	etection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl eth	ner 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthala	te 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ethe	r 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(á, h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Page 3 of 5 Base Neutrals - SW 8270

Matrix: Soil (continued)

Date Received: January 28, 1988 P.O. No.:
Date Reported: February 28, 1988 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

 Lab Number:
 880209

 Sample No.:
 UF1 8-5 SS1 0'

 Date Sampled:
 1-27-88

 Time Sampled:
 1030

 Date Extracted:
 2-2-88

 Date Analyzed:
 2-22-88

Compound	Detection Limits	Analytical Results
	mg/kg	mg/kg
Acetophenone	*	ND
Aniline	*	ND
4-Aminobiphenyl	*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	*	ND
7,12-Dimethylbenz(a)anthra	acene*	ND
a-,a-Dimethylphenethylamir		ND
Diphenylamine	*	ND
1,2-Diphenylhydrazine	*	ND
Ethyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
Methyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	*	ND
2-Naphthylamine	*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	*	ND
N-Nitrosopiperidine	*	ND
Pentachlorobenzene	*	ND
Pentachloronitrobenzene	*	ND
Phenacetin	*	ND
2-Picaline	*	ND
Pronamide	*	ND
1,2,4,5-Tetrachlorobenzene	s*	ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

P.O. No.: Date Received: January 28, 1988 Job No. : AT077 Date Reported: February 28, 1988 ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 880209 Lab Number: VF1 B-5 SS1 0' Sample No : 1-27-88 Date Sampled: Time Sampled: 1030 Date Extracted: 2-2-88 2-22-88 Date Analyzed: Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg Alpha-BHC ND ND Gamma-BHC ND 0.4 Beta-BHC 0.2 ND Heptachlor 0.3 ND Delta-BHC ND 0.2 Aldrin ND 0.2 Heptachlor epoxide ND --* Endosulfan I 0.3 ND Dieldrin ND 4,4'-DDE 0.6 ND Endrin Endosulfan II --* ND 0.3 ND 4,4'-DDD ND 4,4'-DDT 0.5 0.6 ND Endosulfan Sulfate ND Endrin aldehyde ND Endrin Ketone 4.0 ND Chlordane ND --* Methoxychlor 4.0 ND Toxaphene ND 4.0 Aroclor-1016 ND 4.0 Aroclor-1221 ND 4.0 Aroclor-1232 ND 4.0 Aroclor-1242

4.0

4.0

4.0

Aroclor-1248

Aroclor-1254

Aroclor-1260

ND

ND

ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: January 28, 1988 Date Reported: February 28, 1988 P.O. No.:

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880209 Lab Number:

UF1 B-5 SS1 0' Sample No.:

Date Sampled: Time Sampled: 1-27-88 1030 Date Extracted: 2-2-88 Date Analyzed: 2-22-88

	tection imits	ANALYTICAL RESULTS
m	ng/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitrophenol	. 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND ·
2,4,5-Trichlorophenol	0.66	ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 28, 1988

P.O. No.:

Date Reported: February 28, 1988

Job No. : ATU77

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880210 Lab Number:

UF1 B-5 3S2 3.5' Sample No.:

Date Sampled: 1-27-88 Time Sampled: 1130 Date Extracted: 2-2-88

Date Analyzed:

2-23-88

______ Detection ANALYTICAL RESULTS Compound

	mits		
mg	/kg	mg/kg	
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.66	ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ether	0.66	ND	
N-Nitrosodi-n-propyl amine	0.66	ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.6 6	ND	
Isophorone	0.66	ND	
Naphthalene	0.6 6	ND	
Bis(2-chloroethoxy)methane	0.66	ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	ND	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

P.O. No.: Date Received: January 28, 1988 Date Reported: February 28, 1988 Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Benzyl Alcohol

880210 Lab Number:

UF1 B-5 SS2 3.5' Sample No.:

1.3

Date Sampled: 1-27-88 Time Sampled: 1130 Date Extracted: 2-2-88 2-23-88 Date Analyzed:

Compound Detection ANALYTICAL RESULTS Limit mg/kg mg/kg 0.66 0.66 Phenanthrene Anthracene ND ND Dibutyl phthalate
Fluoranthene 0.66 ND 0.66 ND Fluoranthene 4-Chlorophenyl phenyl ether 0.66 ND 0.66 ND Pyrene Butyl Benzyl phthalate 0.66 ND Bis(2-ethylhexyl) phthalate 0.66 ND Chrysene 0.66 ND 4-Bromophenyl phenyl ether 0.66 ND 0.66 Benzo(a)anthracene ND 0.66 Di-n-octylphthalate ND ND 0.66 Benzo(b)fluoranthene 0.66 ND Benzo(k)fluoranthene 6.0 ND Benzidine 1.3 ND 3,3'-Dichlorobenzidine 0.66 Benzo(a)pyrene ND Indeno(1,2,3-cd)pyrene 0.66 Dibenzo(a,h)anthracene 0.66 Benzo(ghi)perylene 0.66 ND ND Benzo(ghi)perylene ND ND

.

Priority Pollutant Analysis Page 3 of 5 Base Neutrals - SW 8270 Matrix: Soil (continued)

Tato Reported. Testaday 25, 1565		January 28, 1988 February 28, 1988	P.O. No
----------------------------------	--	---------------------------------------	---------

ATTN: Mr. Jim Duncan For ES:Atlanta/Volk Field ANGB

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:	380210
Sample No.:	VF1 B-5 SS2 3.5'
Date Sampled:	1-27-88
Time Sampled:	1130
Date Extracted:	2-2-38
Date Analyzed:	2-23-88

Compound	Detection Limits mg/kg	Analytical Results
Acetophenone	*	ND
Aniline	*	ND
4-Aminobiphenyl	*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	*	ND
7,12-Dimethylbenz(a)anthro	acene*	ND
a-,a-Dimethylphenethylamin		ND
Diphenylamine	*	ND
1,2-Diphenylhydrazine	*	ND
Ethyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
Methyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	*	ND
2-Naphthylamine	*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	*	ND
N-Nitrosopiperidine	*	ND
Pentachlorobenzene	*	ND
Pentachloronitrobenzene	*	ND
Phenacetin	*	ND
2-Picoline	*	ND
Pronamide	*	ND
1,2,4,5-Tetrachlorobenzene	g*	ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

ATTN:Mr. Jim Duncan

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880210 UF1 B-5 SS2 3.51 Sample No.: 1-27-88 Pate Sampled: Time Sampled: 1130 Date Extracted. 2-2-88 2-23-88 Date Analyzed:

Date Hhalyzed:	2-23-56		
Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg	
01 - h - DMG		. I.D.	
Alpha-BHC	*	ND NB	
Gamma-BHC	*	ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	. ★	ND	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	*	ND	
Endosulfan II	*	ND	
4,4'-DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	*	ND	
Endrin Ketone	*	ND	
Chlordane	4.0	ND	
Methoxychlor	*	ND	
Toxaphene	4.0	ND	
Aroclor-1016	4.0	ND	
Aroclor-1221	4.0	ND	
Aroclor-1232	4.0	ND	
Aroclor-1242	4.0	ND	
Aroclor-1248	4.0	ND	
Aroclor-1254	4.0	ND	
Aroclor-1260	4.0	ND	

^{*} EPA has not yet determined detection limits for these compounds.

page 5 of 5

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: January 28, 1988 Date Reported: February 28, 1988

FOR: ES:Atlanta/Oolk Field ANGB

ATTN: Mr. Jim Duncan

Address 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880210

Sample No. UF1 B-5 SS2 3.5'
Date Sampled: 1-27-88

 Date Sampled:
 1-27-88

 Time Sampled:
 1130

 Date Extracted:
 2-2-88

 Date Analyzed:
 2-23-88

Detection ANALYTICAL RESULTS Compound Limits mg/kg mg/kg . . 0.66 0.66 2-Chlorophenol 2-Nitrophenol ND 0.66 ND Phenol 2,4-Dimethylphenol 2,4-Dichlorophenol 0.66 ND ND 0.66 2,4-Dichlorophenol U.co 2,4,6-Trichlorophenol U.co 4-Chloro-3-methylphenol 1.3 ND ND 2,4-Dinitrophenol 3.3 2,6-Dichlorophenol --* ND ND 2-Methyl-4,6-Dinitrophenol 3.3 ND Pentachlorophenol ND 3.3 3.3 ND 4-Nitrophenol 3.3 ND Benzoic Acid 0.66 ND 2-Methylphenol 3- & 4-Methylphenol 0.66 ND ND 2,3,4,6-Tetrachlorophenol --* 0.66 ND 2,4,5-Trichlorophenol

Analyst Cea

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 28, 1988 Date Reported: February 28, 1988

Job No : ATU77

ES:Atlanta/Oolk Field ANGB

ATTN: Mr. Jim Duncan

Sample No.:

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880211

UF1 B5 SS3 10'

Date Sampled: Time Sampled: 1-27-98

Date Extracted: Date Analyzed:

1205 2-2-88 2-23-88

Detection ANALYTICAL RESULTS Compound

	mits /kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
		ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Pate Received: January 28, 1988 Pats Reported: February 28, 1988 P.O. No.: Job No. AT077

ATTN: Mr. Jim Duncan FOR: ES:Atlanta/Volk Field ANGB

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Date Analyzed:

Lab Number:	380211
Sample No	UF1 B5 SS3 10'
Pate Sampled:	1-27-88
Time Sampled:	1205
Date Extracted:	2-2-88

Compound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl et	her 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthal	ate 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl eth	ner 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlarabenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	9.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylana	0.66	ND
Benzyl Alcohol	1.3	ND

2-23-88

Matrix: Soil (continued)

Date Received: January 28, 1988
Date Reported: February 28, 1988

P.O. No.:

ATTN: Mr. Jim Duncan

Job No AT077

For: ES:Atlanta/Volk Field ANGB

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 380211

Sample No. UF1 B5 SS3 10'

Date Sampled: 1-27-88 Time Sampled: 1205 Date Extracted: 2-2-88 Date Analyzed: 2-23-88

Compound Detection Analutical Pagulta

Compound	Detection Limits	Analytical Results	
	mg/kg	mg/kg	
Acetophenone	*	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	1.3	ND	
1-Chloronaphthalena	*	ND	
Dibenzofuran	0.66	ND	
p-Dimethylaminoazobenzene	*	ND	
7,12-Dimethylbenz(a)anthro	acene*	ND	
a-,a-Dimethylphenethylami	ne*	ND	
Diphenylamine	*	ND	
l,2-Diphenylhydrazine	*	ND	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	0.66	ND	
l-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	3.3	ND	
3-Nitroaniline	3.3	ND	
4-Nitroaniline	3.3	ND	
N-Nitroso-di-n-butylamine	~ *	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzen	e*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Date Received: January 28, 1988 Date Received: January 28, 1988
Date Reported: February 28, 1988

FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880211 UF1 B5 SS3 10' Sample No.: Date Sampled: 1-27-38 Time Sampled: 1205 Date Extracted: Date Analyzed: 2-2-88

Compound Detection ANALYTICAL RESULTS mg/kg Limits mg/kg Alpha-BHC Gamma-BHC Beta-BHC ND ND 0.4 ND Heptachlor Delta-BHC 0.2 ND 0.3 ND 0.2 ND 0.2 Heptachlor epoxide ND Endosulfan I --* ND Dieldrin 4,4'-DDE 0.3 ND 0.6 ND --* Endrin ND Endosulfan II ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND --* ND Endrin aldehyde --* ND Endrin Ketone 4.0 ND Chlordane Methoxychlor Toxaphene ND --* 4.0 ND Aroclor-1016 4.0 ND 4.0 Aroclor-1221 ND 4.0 Aroclor-1232 ND Aroclor-1242 4.0 ND 4.0 ND Araclor-1248 ND Aroclor-1254 4.0 Aroclor-1260 4.0 ND

2-23-88

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270

Matrix: Soil

January 28, 1988 Date Received: Date Reported: February 28, 1988 P.O. No.:

Job No. : AT077

FOR: ES Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880211

UF1 B5 SS3 10'

1-27-88 1205

Date Sampled: Time Sampled: Date Extracted:

Lab Number:

Sample No.:

2-2-88

Date Analyzed: 2-23-88 Compound Detection ANALYTICAL RESULTS

	imits g/kg	mg/kg	
2-Chlorophenol	0.66	ND	
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	-
2,4-Dimethylphenol	0.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenal	3.3	ND	
2,6-Dichlorophenol	*	ND	
2-Methyl-4,6-Dinitrophenal	3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3.3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND	
2,3,4,6-Tetrachlorophenol	*	ND	
2,4,5-Trichlorophenol	0.66	ND	

1 Verg Analyst

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 3270 Matrix: Soil

Hexachlorobenzene

Date Received: January 28, 1988

Date Reported: February 28, 1988

P.O. No.: Job No. : AT077

ATTN: Mr. Jim Duncan

ES:Atlanta/Volk Field ANGB

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880212

VF1 B6 SS1 3' Sample No.:

Date Sampled: 1-27-88 Time Sampled: 1240

Date Extracted: 2-2-88 2-23-88 Date Analyzed:

Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg 1,3-Dichlorobenzene 0.66 ND 1,4-Dichlorobenzene Hexachloroethane 0.66 ND 0.66 ND Bis(2-chloroethyl)ether 0.66 ND 1,2-Dichlorobenzene 0.66 N-Nitrosodimethylamine 2.5 ND 0.66 ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 ND 1,2,4-Trichlorobenzene 0.66 ND 0.66 ND Nitrobenzene ND 0.66 Isophorone ND 0.66 Naphthalene Bis(2-chloroethoxy)methane 0.66 2-Chloronaphthalene 0.66 ND ND ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene Acenaphthene 0.66 ND 0.66 Acenaphthene Dimethyl phthalate 0.66 ND 2,5-Dinitrotoluene 0.66 ND 0.66 Fluorene ND 2,4-Dinitrotoluene Diethyl phthalate ND 0.66 ND 0.66 N-Nitrosodiphenylamine 0.66 0.66 ND

ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

380212 Lab Number: UF1 86 SS1 0' Sample No.:

1-27-88 Date Sampled: Time Sampled: 1240 Date Extracted: 2-2-88

Date Analyzed: 2-23-88

• · · · · · · · · · · · · · · · · · · ·	tection Limit	ANALYTICAL RESULTS
T	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	r 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	9.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene		ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Page 3 of 5

Date Received:

January 28, 1988 February 28, 1988 Date Reported:

For: ES:Atlanta/Oolk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880212 Sample No.:

Date Sampled: Time Sampled: Date Extracted: UF1 B6 SS1 0' 1-27-88

1240 2-2-88

Date Analyzed: 2-23-88 Detection Analytical Results Compound

	Limits mg/kg	mg/kg	
Acetophenone	*	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	1.3	ND	
l-Chloronaphthalene	*	ND	
Dibenzofuran	0.66	ND	
p-Dimethylaminoazobenzene	*	ND	
7,12-Dimethylbenz(a)anthra	acene*	ND	
a-,a-Dimethylphenethylami	ne*	ND	
Diphenylamine	*	ND	
1,2-Diphenylhydrazine	*	ND	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	0.66	ND	
l-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	3.3	ND	
3-Nitroaniline	3.3	ND	
4-Nitroaniline	3.3	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzene	e*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 28, 1988 P.O. No.:
Date Reported: February 28, 1988 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:	380212
Sample No.:	UF1 B6 3S1 0'
Date Sampled:	1-27-88
Time Sampled	1240
Date Extracted:	2-2-88
Date Analyzed:	2-23-88

Compound Detection ANALYTICAL RESULTS Limits mg∕kg mg/kg Alpha-BHC Gamma-BHC ND __* ND Beta-BHC ND Heptachlor 0.2 ND Delta-BHC 0.3 ND 5.2 Aldrin ND 0.2 Heptachlor epoxide Endosulfan I ND --* ND 0.3 Dieldrin ND 01e1d:1... 4,4'-DDE 0.6 ND Endrin --* ND Endosulfan II --* ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate Endrin aldehyde 0.6 ND --* ND Endrin Ketone --* ND 4.0 Chlordane ND Methoxychlor --* ND 4.0 Toxaphene ND Aroclor-1016 4.0 ND Aroclor-1221 4.0 ND Aroclor-1232 4.0 ND Aroclor-1242 4.0 ND 4.0 ND Aroclor-1248 4.0 ND Aroclor-1254 Aroclor-1260 4.0 ND

^{*} EPA has not yet determined detection limits for these compounds.

Date Reported: February 28, 1988

Date Received: January 28, 1988

P.O. No.

Job No. AT077

FOR: ES: Atlanta / Volk Field ANGB

ATTN: Mr. Jim Duncan

Address 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: Sample No.

830212

UF1 B6 551 0' 1-27-88

Date Sampled: Time Sampled: Date Extracted

1240 2-2-88

Date Analyzed.

2-23-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenal	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0 66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachloropheno	1*	ND
2,4,5-Trichlorophenol	0.66	ND

Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 28, 1988 Date Reported: February 28, 1988 P.O. No.:

Job No. : AT077

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880205

Sample No.: UF1 B6 3S2 3.5

Date Sampled: 1-27-88 Time Sampled: 1310 Date Extracted: 2-2-88 Date Analyzed: 2-23-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1,3-Dichlorobenzene	6.6	ND
1,4-Dichlorobenzene		ND
Hexachloroethane	6.6	ND
Bis(2-chloroethyl)ether	-	ND
1,2-Dichlorobenzene	6.6	ND
N-Nitrosodimethylamine	25	ND
Bis(2-chloroisopropyl)et		ND
N-Nitrosodi-n-propyl ami		ND
Hexachlorobutadiene	6.6	ND
1,2,4-Trichlorobenzene	6.6	ND
Nitrobenzene	6.6	ND
Isophorone	6.6	ND
Naphthalene	6.6	ND
Bis(2-chloroethoxy)metha	ine 6.6	ND
2-Chloronaphthalene	6 . 6	ND
Hexachlorocyclopentadier	ne 6.6	ND
Acenaphthylene	6.6	ND
Acenaphthene	6.6	ND
Dimethyl phthalate	6.6	ND
2,6-Dinitrotoluene	6.6	ND
Fluorene	6.6	ND
2,4-Dinitrotoluene	6.6	ND
Diethyl phthalate	6.6	ND
N-Nitrosodiphenylamine	6.6	ND
Hexachlorobenzene	6.6	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: January 28, 1988
Date Reported: February 28, 1988

P.O. No.: Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880205

Sample No.: UF1 86 SS2 3.5

Date Sampled: 1-27-88 Time Sampled: 1310 Date Extracted: 2-2-88 Date Analyzed: 2-23-88

Compound De	etection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	6.6	ND
Anthracene	6.6	ND
Dibutyl phthalate	6.6	ND
Fluoranthene	6.6	ND
4-Chlorophenyl phenyl ethe	er 6.6	ND
Pyrene	6.6	ND
Butyl Benzyl phthalate	6.6	ND
Bis(2-ethylhexyl) phthalad	te 6.6	ND
Chrysene	6.6	ND
4-Bromophenyl phenyl ether	6.6	ND
Benzo(a)anthracene	6.6	ND
Di-n-octylphthalate	6.6	ND
Benzo(b)fluoranthene	6.6	ND
Benzo(k)fluoranthene	6.6	ND
Benzidine	60	ND
3,3'-Dichlorobenzidine	13	ND
Benzo(a)pyrene	6.6	ND
Indeno(1,2,3-cd)pyrene	6.6	ND .
Dibenzo(a,h)anthracene	6.6	ND
Benzo(ghi)perylene	6.6	ND ,
Benzyl Alcohol	13	ND

Matrix: Soil (continued)

 Date Received:
 January 28, 1988
 P.O. No.:

 Date Reported:
 February 28, 1988
 Job No.:
 AT077

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

 Lab Number:
 380205

 Sample No.:
 0F1 B6 SS2 3.5°

 Date Sampled:
 1-27-88

 Time Sampled:
 1310

 Date Extracted:
 2-2-88

 Date Analyzed:
 2-23-88

Compound	Detection Limits	Analytical Results	_
	mg/kg	mg/kg	
Acetophenone	*	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	13	ND	
1-Chloronaphthalene	*	ND	
Dibenzofuran	6.6	ND	
p-Dimethylaminoazobenzene	*	ND	
7,12-Dimethylbenz(a)anthra	cene*	ND	
a-,a-Dimethylphenethylamin		ND	
Diphenylamine	*	ND	
1,2-Diphenylhydrazine	*	ND	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	6.6	ND	
1-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	33	ND	
3-Nitroaniline	33	ND	
4-Nitroaniline	33	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzene	*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 28, 1988 P.O. No.: Date Reported: February 28, 1988 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

Sample No.:

Date Sampled:

Time Sampled:

Date Extracted:

Date Analyzed:

Compound

Detection

Limits

mg/kg

MF1 86 3S2 3.5'

1-27-38

1310

2-2-88

ANALYTICAL RESULTS

mg/kg

mg/kg

880205

Compound	Limits	HAMILIAND KERORIS
	mg/kg	m g /kg
Alpha-BHC	*	ND
Gamma-BHC	*	ND
Beta-BHC	4	ND
Heptachlor	4 2 3 2	ND
Delta-BHC	3	ND
Aldrin	2	ND
Heptachlor epoxide	2	ND
Endosulfan I	*	ND
Dieldrin	3 6	ND
4,4'-DDE	6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	3 5	ND
4,4'-DDT	5	ND
Endosulfan Sulfate	6	ND
Endrin aldehyde	*	ND
Endrin Ketone		ND
Chlordane	40	ND
Methoxychlor	*	ND
Toxaphene	40	ND
Aroclor-1016	40	ND
Aroclor-1221	40	ND
Aroclor-1232	40	ND
Aroclor-1242	40	ND
Aroclor-1248	40	ND
Aroclor-1254	40	ND
Aroclor-1260	40	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270

Matrix: Soil

P.O. No.: Date Received: January 28, 1988

Date Reported: February 28, 1988 Job No. : AT027

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Compound

4-Nitrophenol

2-Methylphenol

3- & 4-Methylphenol

2,4,5-Trichlorophenol

2,3,4,6-Tetrachlorophenol --*

Benzoic Acid

Lab Number: 880205

Sample No.: UF1 B6 SS2 3.5

Detection

33

33

6.6

6.6

6.6

1-27-88 Date Sampled: Time Sampled: 1310 Date Extracted: 2-2-88 Date Analyzed: 2-23-88

Limits mg/kg mg/kg 6.6 2-Chlorophenol ND 2-Nitrophenol 6.6 ND Phenol 6.6 ND 2,4-Dimethylphenol 6.6 2,4-Dichlorophenol 6.6 2,4,6-Trichlorophenol 6.6 4-Chloro-3-methylphenol 13 ND ND ND ND ND 2,4-Dinitrophenol 33 2,6-Dichlorophenol --* · ND 2-Methyl-4,6-Dinitrophenol 33 ND Pentachlorophenol 33 ND

ANALYTICAL RESULTS

ND

ND

ND

ND

ND

ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 28, 1988 Date Reported: February 28, 1988

P.O. No.:

Job No. : AT077

FOR:

ES Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880206 Lab Number:

UF1 B6 SS3 3.51 Sample No.

1-27-98 Pate Sampled: Time Sampled 1335 2-2-88 Date Extracted:

Date Analyzed:		2-22-98
Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2 . 5	ND
Bis(2-chloroisopropyl)e	ther 0.66	ND
N-Nitrosodi-n-propyl am		ND
Hexachlorobutadiene		ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	2.7
Bis(2-chloroethoxy)meth	ane 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadie	ne 0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 9270 Matrix: Soil

(continued)

Date Received: January 28, 1988
Date Reported: February 28, 1988

FOR: ES:Atlanta/Oolk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329

Lab Number: 880206 Sample No.: UF1 B6 SS3 8 5 Date Sampled: 1-27-88 Time Sampled: Date Extracted: 1335 2-2-88

2-22-88 Date Analyzed: _____

Compound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl et	her 0.66	ND
Pyrene	0.66	NĎ
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthal	ate 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl eth	er 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270

Page 3 of 5

Matrix: Soil (continued)

Pate Received: January 28, 1988
Date Reported: February 28, 1988

For: ES:Atlanta/Volk Field ANGB ATTN Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880206

UF1 B6 533 9.51 Sample No.: Date Sampled: 1-27-88

Time Sampled: 1335 2-2-88 Date Extracted: Pate Analyzed: 2-22-38

Compound	Detection Limits	Analytical Results
	mg/kg	mg/kg
Acetophenone	*	ND
Aniline	*	ND
4-Aminobiphenyl	*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzer	ne*	ND
7,12-Dimethylbenz(a)antl		ND
a-,a-Dimethylphenethylam		ND
Diphenylamine	*	ND
1,2-Diphenylhydrazine	*	ND
Ethyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
Methyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
2-Methylnaphthalene	0.66	2.7
1-Naphthylamine	*	ND
2-Naphthylamine	*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamin	ne*	ND
N-Nitrosopiperidine	*	ND
Pentachlorobenzene	*	ND
Pentachloronitrobenzene	*	ND
Phenacetin	*	ND
2-Picoline	 ★	ND
Pronamide	*	ND
1,2,4,5-Tetrachlorobenze	ne*	ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 3270 Matrix: Soil

Date Received: January 28, 1988
Date Reported: February 28, 1988 P.O. No.:

Job No. : ATU77

ATTN:Mr. Jim Duncan FOR: ES:Atlanta/Volk Field ANGB

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880206

UF1 B6 SS3 8.5' Sample No.:

1-27-88 Date Sampled: 1335 Time Sampled: Date Extracted: 2-2-88 2-22-88 Date Analyzed:

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
Alpha-BHC		ND
Gamma-BHC	*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: January 28, 1988 Date Reported:

February 28, 1988

P.O. No.:

Job No. : AT077

ES: Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880206

Sample No.: UF1 B6 SS3 3.5'

1-27-88 Date Sampled: Time Sampled: 1335 Date Extracted: 2-2-88

Date Analyzed: 2-22-38

•	etection Limits	ANALYTICAL RESULTS
	ng/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
	0.66	DN
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	. ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol		ND
2,4,5-Trichlorophenol	0.66	ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

IOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 28, 1988 P.O. No.:
Date Reported: February 28, 1988 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 ATTN: Mr. Jim Duncan

Lab Number: 880207

Sample No.: UF1 B7 SS1 0'

Date Sampled: 1-27-38 Time Sampled: Date Extracted: 1500 2-2-88 Date Analyzed: 2-22-88

-	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Héxachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)eth	er 0.66	ND
N-Nitrosodi-n-propyl amin		ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methan	e 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Date Received: January 28, 1988 Date Reported: February 28, 1988 P.O. No.: Job No. : AT077

FOR: ES:Atlanta/Uolk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:	880207
Sample No.:	UF1 B7 SS1 0'
Date Sampled:	1-27-88
Time Sampled:	1500
Date Extracted:	2-2-88
Date Analyzed:	2-22-88

Compaund	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl e	ther 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phtha	late 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl et	her 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Page 3 of 5

(continued)

Date Received: January 28, 1988
Date Reported: February 28, 1988

ATTN: Mr. Jim Duncan

For: ES:Atlanta/Volk Field ANGB

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880207

Sample No.: UF1 B7 SS1 0'

 Date Sampled:
 1-27-88

 Time Sampled:
 1500

 Date Extracted:
 2-2-88

 Date Analyzed:
 2-22-88

Compound Detection Analytical Results Limits mg∕kg mg/kg Acetophenone Aniline ND --* ND 4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene
Dibenzofuran --* ND 1.3 ND --* ND 0.66 ND p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenylamine Diphenylamine
1,2-Diphenylhydrazine
Ethyl methanesulfonate
3-Methylcholanthrene ND --* ND ND ND Methyl methanesulfonate ND 3-Methylcholanthrene
2-Methylnaphthalene
1-Naphthylamine
2-Naphthylamine
2-Nitroaniline
3-Nitroaniline ND 0.65 ND --* ND ND 3.3 ND 3-Nitroaniline 3.3 ND 4-Nitroaniline N-Nitrosopiperidine

3.3
N-Nitrosopiperidine ND ND N-Nitrosopiperidine Pentachlorobenzene ND --* ND Pentachloronitrobenzene ND Phenacetin ND --* 2-Picoline --* ND Pronamide _-* ND 1,2,4,5-Tetrachlorobenzene --* ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 28, 1988
Date Reported: February 28, 1988 P.O. No.: Job No. : AT077 FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 Lab Number: 880207 Sample No.: UF1 B7 SS1 0' Date Sampled: 1-27-88 Time Sampled 1500 Date Extracted: Date Analyzed: 2-2-88 2-22-88 Compound Detection ANALYTICAL RESULTS Limits m**g**/kg mg/kg Alpha-BHC --* ND Gamma-BHC ND 0.4 Beta-BHC ND Heptachlor 0.2 ND Delta-BHC 0.3 ND 0.2 Aldrin ND 0.2 Heptachlor epoxide ND Endosulfan I --* ND Dieldrin 4,4'-DDE 0.3 ND 0.6 ND Endrin --+ ND Endosulfan II ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde --* ND Endrin Ketone ND 4.0 ND Chlordane Methoxychlor --* ND 4.0 Toxaphene ND Aroclor-1016 4.0 ND Aroclor-1221 4.0 ND 4.0 Aroclor-1232 ND 4.0 Aroclor-1242 ND

4.0

4.0

4.0

Aroclor-1248

Aroclor-1254

Araclar-1260

ND

ND

ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270

Matrix: Soil

Date Received: January 28, 1988 Date Reported: February 28, 1988 P.O. No.:

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880207

Sample No.: UF1 B7 SS1 0'

Date Sampled: 1-27-88 Time Sampled: 1500 Date Extracted: 2-2-88 Date Analyzed: 2-22-88

•	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.6 6	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 28, 1988 Date Reported: February 28, 1988

P.O. No.:

Job No. : AT077

ATTN: Mr. Jim Duncan

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329

Lab Number: 880208

Sample No.: UF1 B7 SS2 3.5'

Date Sampled: 1-27-88 Time Sampled: 1530 Date Extracted: 2-2-88 2-22-88 Date Analyzed:

•	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1,3-Dichlorobenzene	υ.66	ND
1,4-Dichlorobenzene		ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine		ND ·
Bis(2-chloroisopropyl)eth		ND
N-Nitrosodi-n-propyl amir		ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.56	ND
Nitrobenzene	0.68	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methar	ne 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	8.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Matrix: Soil (continued)

Date Received: January 28, 1988
Date Reported: February 28, 1988

P.O. No.: Job No. : AT077

For: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880208 Lab Number:

UF1 B7 SS2 3.5' Sample No.:

1-27-88 Date Sampled: Time Sampled: 1530 Date Extracted: 2-2-88

Date Analyzed: 2-22-88

Compound	Detection Limits	Analytical Results
	mg/kg	mg/kg
Acetophenone	*	ND
Aniline	*	ND
4-Aminobiphenyl	*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	*	ND
7,12-Dimethylbenz(a)anthro	acene*	ND
a-,a-Dimethylphenethylami		ND
Diphenylamine	*	ND
1,2-Diphenylhydrazine	*	ND
Ethyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
Methyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	*	ND
2-Naphthylamine	*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	*	ND
N-Nitrosopiperidine	*	ND
Pentachlorobenzene	*	ND
Pentachloronitrobenzene	*	ND
Phenacetin	*	ND
2-Picoline	*	ND
Pronamide	*	ND
1,2,4,5-Tetrachlorobenzen	e*	ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: January 28, 1988

P.O. No.:

Date Reported: February 26, 1988

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880208

Sample No.: Date Sampled:

Lab Number:

UF1 B7 SS2 3.51

Time Sampled:

1-27-88

Date Extracted:

1530 2-2-88

Date Analyzed:

2-22-88

Compound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl e	ther 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phtha	late 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl et	her 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene		ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene		ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: January 28, 1988 Date Reported: February 28, 1988 P.O. No.:

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880208

Sample No.: UF1 B7 SS2 3.5'

Date Sampled: 1-27-88
Time Sampled: 1530
Date Extracted: 2-2-88

Date Analyzed: 2-22-88

•	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

Analyst Aluga

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

 Date Received:
 January 28, 1988
 P.O. No.:

 Date Reported:
 February 28, 1988
 Job No.:
 AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Date Analyzed:

 Lab Number:
 880208

 Sample No.:
 UF1 B7 5S2 3.5'

 Date Sampled:
 1-27-88

 Time Sampled:
 1530

 Date Extracted:
 2-2-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS
Alpha-BHC	*	ND
Gamma-BHC	<u>_</u> *	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0 . 6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

2-22-88

 $[\]star$ EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Base Neutrals - SW 8220 Matrix: Soil

(continued)

Date Received: January 28, 1988
Date Reported: February 28, 1988

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 ATTN: Mr. Jim Duncan

Lab Number:	880204
Sample No.:	UF1 B7 SS3 3.5'
Date Sampled:	1-27-88
Time Sampled:	1600
Date Extracted:	2-2-88
Date Analyzed:	2-19-88

Compound D	etection Limit	ANALYTICAL RESULTS
	mg/kg	mg∕kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl eth	er 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthala	te 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ethe	r 0.66	ND
Benzo(a)anthracene	0.66	. ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6 .0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 28, 1988 Date Reported: February 28, 1988

P.O. No.:

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880204

Sample No.:

VF1 B7 SS3 a.5

Date Sampled:

1-27-88

Time Sampled: Date Extracted:

1600 2-2-88

Date Analyzed:

2-19-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Héxachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2 . 5	ND
Bis(2-chloroisopropyl)e	ther 0.66	ND
N-Nitrosodi-n-propyl am:		ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)metha	ane 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadie	ne 0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	. ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 3270 Matrix: Soil (continued)

Page 3 of 5

Date Received: January 28, 1988 Date Reported: February 28, 1988

P.Q. No.: Job No. : AT077

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

For: ES:Atlanta/Volk Field ANGB

1,2,4,5-Tetrachlorobenzene --*

880204 Lab Number:

UF1 B7 SS3 8.51 Sample No.:

Date Sampled: 1-27-88 Time Sampled: 1600 2-2-88 Date Extracted: Date Analyzed: 2-19-88

Compound Detection Analytical Results Limits mg/kg mg/kg ______ Acetophenone Aniline ND Aniline
4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene --* ND --* ND 1.3 ND --* ND Dibenzofuran 0.66 ND p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND ND a-,a-Dimethylphenethylamine --* Diphenylamine ND 1,2-Diphenylhydrazine ND Ethyl methanesulfonate 3-Methylcholanthrene --* ND ND Methyl methanesulfonate ND 3-Methylcholanthrene
2-Methylnaphthalene
1-Naphthylamine
2-Naphthylamine
2-Nitroaniline
3-Nitroaniline --* ND 0.66 ND ND --* ND 3.3 ND 3.3 ND 3-Nitroaniline 3.3 ND 4-Nitroaniline ND N-Nitroso-di-n-butylamine --* N-Nitrosopiperidine Pentachlorobenzene --* ND ND Pentachloronitrobenzene ND ND Phenacetin ND 2-Picoline --* ND Pronamide

ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Pate Received: January 28, 1988
Date Reported: February 28, 1988

FOR: ES:Atlanta/Oolk Field ANGB

ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880204

UF1 B7 SS3 8.5'

 Sample No.:
 UF1 B7 S

 Date Sampled:
 1-27-88

 Time Sampled:
 1600

 Date Extracted:
 2-2-88

 Date Analyzed:
 2-19-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	*	ND
Gamma-BHC	<u>_</u> *	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosul?an II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SU 8270 Matrix: Soil

Date Received: January 28, 1988 Date Reported: February 28, 1988

P.O. No.:

Job No. : AT077

FOR: ES:Atlanta/Oolk Field ANGB

ATTN: Mr Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

Sample No.: VF1 B7 SS3 3.51

Date Sampled: 1-27-88 Time Sampled: 1600 Date Extracted: 2-2-88 Date Analuzed: 2-19-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlaraphenal	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 29, 1988

P.O. No.:

Pate Reported: March 4, 1988 PATE REISSUED: March 10, 1988

Job No. : AT022

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880217 .ab Number:

UF1, B8, SS1, 0' Sample No.:

1-28-88 late Sampled: 1045 'ime Sampled: 2-2-88 late Extracted:

Date Analyzed:

3-1-98

ompound	Detection Limits	ANALYTICAL RESULTS
	mg∠kg	m g /kg
.3-Dichlorobenzene	0.66	ND
,4-Dichlorobenzene	0.66	ND
[exachloroethane	0.66	ND
lis(2-chloroethyl)ether		ND
,2-Dichlorobenzene	0.66	ND
	2.5	ND
I-Nitrosodimethylamine		ND
lis(2-chloroisopropyl)e		ND
-Nitrosodi-n-propyl am		. ND
lexachlorobutadiene	0.66	ND ND
,2,4-Trichlorobenzene	0.66	
litrobenzene	0.66	ND NB
sophorone	0.66	ND
laphthalene	0.66	ND NB
lis(2-chloroethoxy)meth		ND
-Chloronaphthalene	0.66	ND NB
exachlorocyclopentadie		ND NB
cenaphthylene	0.66	ND
cenaphthene	0.66	ND
imethyl phthalate	0.66	ND
,6-Dinitrotoluene	0.66	ND
luorene	0.66	ND
,4-Dinitrotoluene	0.66	ND
iethyl phthalate	0.66	ND
-Nitrosodiphenylamine	0.66	ND
exachlorobenzene	0.66	, ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: January 29, 1988
Date Reported: March 4, 1988
DATE REISSUED: March 10, 1988

P.O. No.: Job No.: AT077

ATTN: Mr. Jim Duncan

FOR: ES: Atlanta Molk Field ANGB

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

380217 Lab Number OF1, 88, SS1, 0' Bample No : 1-29-88 Date Sampled: Time Sampled: 1045 2-2-88 3-1-88 Date Extracted: Pate Analyzed:

Compound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
inthracene	0.66	ND
Dibutyl phthalate	0.60	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl et	ther 0.66	ND
Tyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthal		ND
Thrysene	0.66	ND
1-Bromophenyl phenyl eth	ner 0.66	ND
Benzo(a)anthracene	0.66	ND
)1-n-octylphthalate	0.66	ND
Benzo(b) fluoranthene		ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
1,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
lenzo(ghi)perylene	0.66	ND
lenzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil (continued)

Page 3 of 5

DATE REISSUED: March 10, 1988

For : ES:Atlanta/Oolk Field ANGB ATTN: Mr Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 380217

Sample No.: UF1, B8, SS1, 0'

 Date Sampled:
 1-28-88

 Time Sampled:
 1045

 Date Extracted:
 2-2-88

Detection Analytical Results Compound Limits mg/kg mg/kg Acetophenone Aniline CI1 --* ND 4-Aminobiphenyl 4-Chloroaniline --* ND 1-Chloronaphthalene Dibenzofuran p-Dimethalene 1.3 ND MD --* 0.66 ND p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND ND a-,a-Dimethylphenethylamine --* ND Diphenulamine 1,2-Diphenylhydrazine ND Ethyl methanesulfonate ND 3-Methylcholanthrene ND ND Methyl methanesulfonate 3-Methylcholanthrene 2-Methylnaphthalene --* ND 0.66 ND 1-Naphthylamine ND ND 2-Naphthylamine 2-Nitroaniline 3.3 ND 3.3 ND 3-Nitroaniline 3.3 4-Nitroaniline ND N-Nitroso-di-n-butylamine --* ND N-Nitrosopiperidine --* ND Pentachlorobenzene __* ND ND Pentachloronitrobenzene Phenacetin ND ND 2-Picoline ND Pronamide ND 1,2,4,5-Tetrachloropenzene

^{*}EPA has not yet determined detection limits for these compounds. E-274

Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 29, 1988
Date Reported: March 4 1988 Job No. AT077

DATE REISSUED: March 10, 1988

FOR: ES:Atlanta/Oolk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 380217

Sample No.: OF1, B8, SS1, 0'

Date Sampled: 1-28-38 Time Sampled: 1045 Date Extracted: 2-2-88 Date Analyzed: 3-1-38

Compound Detection ANALYTICAL RESULTS
Limits
mg/kg mg/kg mg∕kg mg⁄kg -ND ND Endrin --*
Endosulfan II --*
4,4'-DDD 0.3
4,4'-DDT 0.5
Endosulfan Sulfate 0.6
Endrin aldehyde --*
Endrin Ketone --*
Chlordane 4.0 ND ND ND ND ND ND Chlordane
Methoxychlor
Toxaphene
Aroclor-1016
Aroclor-1221 4.0 ND --* ND 4.0 ND 4.0 ND 4.0 ND Aroclor-1232 Aroclor-1242 Aroclor-1248 4.0 4.0 ND ND 4.0 ND Aroclor-1254 4.0 ND Aroclor-1260 4.0 ND

EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

January 29, 1988 Date Received: ATOZZ Pate Reported: March 4, 1988 Job No. March 10, 1988 DATE REISSUED: FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan Address:57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 880217 Lab Number: UF1, B8, 3S1, 0' Sample No.: Date Sampled: 1-28-88 1045 Time Sampled: 2-2-88 Date Extracted: 3-1-88 Date Analyzed:

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	L*	ND
2,4,5-Trichlorophenol	0.66	ND

Analyst // Mag

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

MOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

P.O. No.: Pate Received: January 29, 1988 Date Reported: March 4, 1988 Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590 ATTN: Mr. Jim Duncan

Atlanta, Georgia 30329

Lab Number:	880218
Sample No.:	UF1, B8, SS2, 3.5
Date Sampled:	1-28-88
Time Sampled:	1125
Date Extracted:	2-2-88
Date Analyzed:	3-1-88

Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg 1,3-Dichlorobenzene 0.66
1,4-Dichlorobenzene 0.66
Hexachloroethane 0.66
Bis(2-chloroethyl)ether 0.66
1,2-Dichlorobenzene 0.66
N-Nitrosodimethylamine 2.5 ND ND ND ND ND ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND 0.66 Hexachlorobutadiene ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND Acenaphthene 0.66 ND Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND 0.66 Fluorene ND 2,4-Dinitrotoluene
Diethyl phthalate 0.66 ND Diethyl phthalate N-Nitrosodiphenylamine 0.66 ND 0.66 ND Hexachlorobenzene 0.66 ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Date Received: January 29, 1988 Date Reported: March 4, 1988 Job No. : AT077

ATTN: Mr. Jim Duncan FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880218 Lab Number:

UF1, B8, SS2, 3.5' 1-28-88 Sample No.:

Date Sampled: Time Sampled: 1125 2-2-88 Date Extracted: 3-1-88 Date Analyzed:

Compound De	tection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ethe	r 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalat	e 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene		ND
Di-n-octylphthalate		ND
Benzo(b)fluoranthene		ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene		ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Matrix: Soil (continued)

Date Received: January 29, 1988 P.O. No.:

Date Reported: March 4, 1988 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880218
Sample No.: UF1, B8, SS2, 3.5'
Date Sampled: 1-28-88

Time Sampled: 1-28-88
Time Sampled: 1125
Date Extracted: 2-2-88
Date Analyzed: 3-1-88

Compound Analytical Results Detection Limits mg/kg mg/kg Acetophenone --* Aniline ND 4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene --* ND 1.3 --* ND ND Dibenzofuran ND p-Dimethylaminoazobenzene ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenylamine ND 1,2-Diphenylhydrazine ND ND Ethyl methanesulfonate ND 3-Methylcholanthrene Methyl methanesulfonate ND 3-Methylcholanthrene --* ND 2-Methylnaphthalene 0.66 ND ND 1-Naphthylamine 2-Naphthylamine ND 2-Nitroaniline 3.3 ND 3-Nitroaniline 3.3 ND 4-Nitroansline 3.3 ND N-Nitroso-di-n-butylamine --* ND N-Nitrosopiperidine --* ND Pentachlorobenzene ND Pentachloronitrobenzene ND ND Phenacetin 2-Picoline ND Pronamide ND ND 1,2,4,5-Tetrachlorobenzene

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

page 4 of 5

.,2012,

Date Received: January 29, 1988 P.O. No.:

Date Reported: March 4, 1988 Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan

3-1-88

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Date Analyzed:

Lab Number:	880218
Sample No.:	UF1, B8, SS2, 3.5
Date Sampled:	1-28-88
Time Sampled:	1125
Date Extracted:	2-2-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
Alpha-BHC	*	ND
Gamma-BHC	*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0 . 2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor		ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Date Received:

January 29, 1988

P.O. No.:

Date Reported: March 4, 1988

Job No. : AT077

ES: Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880218

Sample No.:

UF1, B8, SS2, 3.5'

Date Sampled: Time Sampled: 1-28-88 1125

Date Extracted: Date Analyzed:

2-2-88 3-1-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol		ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachloropheno		ND
2,4,5-Trichlorophenol	0.66	ND

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Reported: March 4, 1988 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880219

Sample No.: UF1 B8 SS3 8.5'

 Date Sampled:
 1-28-88

 Time Sampled:
 1145

 Date Extracted:
 2-2-88

 Date Analyzed:
 3-1-88

______ Detection ANALYTICAL RESULTS Compound Limits mg/kg mg/kg 1,3-Dichlorobenzene 0.66 1,4-Dichlorobenzene 0.66 Hexachloroethane 0.66 ND ND 0.66 ND Bis(2-chloroethyl)ether 0.66 ND 1,2-Dichlorobenzene 0.66 N-Nitrosodimethylamine 2.5 0.66 ND ND ND Bis(2-chloroisopropyl)ether 0.66 N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 ND ND 1,2,4-Trichlorobenzene 0.66 Nitrobenzene 0.66 ND 0.66 ND Isophorone ND 0.66 Naphthalene Bis(2-chloroethoxy)methane 0.66 ND ND 2-Chloronaphthalene 0.66 Hexachlorocyclopentadiene 0.66 ND 0.66 ND Acenaphthylene ND Acenaphthene 0.66 Dimethyl phthalate 0.66 ND 2,6-Dinitrotoluene 0.66 ND Fluorene 0.66 ND 2,4-Dinitrotoluene
Diethyl phthalate 0.66 ND ND 0.66 0.66 ND N-Nitrosodiphenylamine ND Hexachlorobenzene 0.66

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

1atrix: 5011 (continued)

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880219

Sample No.: UF1 B8 SS3 8.5'

Date Sampled: 1-28-88
Time Sampled: 1145
Date Extracted: 2-2-88
Date Analyzed: 3-1-88

Compound I	Detection Limit mg/kg	ANALYTICAL RESULTS mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl eth	ner 0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthala	te 0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ethe	r 0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

Page 3 of 5

Date Received: January 29, 1988 P.O. No.: Date Reported: March 4, 1988 Job No. : AT077

(continued)

ATTN: Mr. Jim Duncan For: ES:Atlanta/Volk Field ANGB

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Pronamide

1,2,4,5-Tetrachlorobenzene

880219 Lab Number:

UF1 88 SS3 8.51 Sample No.:

Date Sampled: 1-28-88 Time Sampled: 1145 Date Extracted: 2-2-88 3-1-88 Date Analyzed:

Detection Analytical Results Compound Limits mg/kg mg∕kg Acetaphenone ND Aniline
4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene --* --* ND ND 1.3 ND --* ND 0.66 ND Dibenzofuran ND p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenylamine 1,2-Diphenylhydrazine ND ND Ethyl methanesulfonate 3-Methylcholanthrene ND ND Methyl methanesulfonate 3-Methylcholanthrene 2-Methylnaphthalene ND ND 0.66 1-Naphthylamine
2-Naphthylamine
2-Nitroaniline
3-Nitroaniline
4-Nitroaniline --* ND ND 3.3 ND 3.3 ND 3.3 ND 4-Nitroaniline ND N-Nitroso-di-n-butylamine N-Nitrosopiperidine ND ND Pentachlorobenzene ND Pentachloronitrobenzene ND Phenacetin ND 2-Picoline

--*

ND

ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 29, 1988 P.O. No.:

Date Reported: March 4, 1988 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880219

Sample No.: UF1 B8 SS3 8.5'

Date Sampled: 1-28-88
Time Sampled: 1145
Date Extracted: 2-2-88
Date Analyzed: 3-1-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
Alpha-BHC	*	ND
Gamma-BHC	★	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Araclar-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

page 5 of 5

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received:

January 29, 1988

P.O. No.:

Job No. : AT077

Date Reported: March 4, 1988

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880219

Sample No.:

UF1 B8 SS3 8.5'

Date Sampled: Time Sampled: 1-28-88

Date Extracted:

1145 2-2-88

Date Analyzed:

3-1-88

•	tection imits	ANALYTICAL RESULTS
π	ng/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol •	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

Date Received: January 29, 1988 Date Reported: March 4, 1988 DATE REISSUED: March 10, 1988

Job No. : AT077

FOR: ES: Atlanta/Oolk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329

880220 Lab Number:

Sample No.:

Pate Sampled: Time Sampled:

Date Extracted:

Date Analyzed:

OF1, 89, SS1, 0' 1-28-38

1320

2-2-88

3-1-38

Compound	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	. ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2 5	ND
Bis(2-chloroisopropyl)eth	ner 0.66	ND
N-Nitrosodi-n-propyl amir		ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chlcroethoxy)methar	ne 0.66	ND
2-Chloronaphthalene	0.66	ND
. Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Date Received: January 29, 1988

page 2 of 5

Date Reported: March 4, 1988

DATE REISSUED: March 10, 1988

ATTN: Mr. Jim Duncan

Address 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

FOR: ES:Atlanta/Volk Field ANGB

380220

UF1, B9, SS1, 0' 1-28-88

Sample No . Pate Sampled: Time Sampled:

1320

Date Extracted: Date Analyzed:

2-2-88

Lab Number:

3-1-88

Compound	Detection Limit	ANALYTICAL RESULTS
	mg∕kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl e	ther 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phtha	late 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl et	her 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0:66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene		ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil (continued)

Date Received: January 29, 19 Date Reported: March 4, 1988 DATE REISSUED: March 10, 1988 January 29, 1988 P.O. No.: Job No. AT077

Page 3 of 5

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:	880220
Sample No.:	UF1, B9, 3S1, 0'
Date Sampled:	1-28-88
Time Sampled:	1320
Date Extracted:	2-2-38
Date Analuzed:	3-1-88

Compound	Detection Limits	Analytical Results	_
1	mg/kg	mg/kg	
Acetophenone	*	ND	
Aniline	*	DIA	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	1.3	ND	
l-Chloronaphthalene	*	ND	
Dibenzofuran	0.66	ND	
p-Dimethylaminoazobenzene	*	ND	
7,12-Dimethylbenz(a)anthra	icene*	ND	
a-,a-Dimethylphenethylamin	e*	ND	
Diphenylamine 1.2-Diphenylhudrazine	*	ND	
1,2-Diphenylhydrazine	*	ND	
Ethyl methanesulfonate	*	ND	
	*	ND	
3-Methylcholanthrene Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
	0.66	ND	
2-Methylnaphthalene 1-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	3.3	ND	
3-Nitroaniline	3.3	ND	
4-Nitroaniline	3.3	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidinė	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzene	*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

page 4 of f

FOR: ES:Atlanta/Oolk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

 Lab Number:
 380220

 Sample No.:
 9F1, B9, SS1, 0°

 Date Sampled:
 1-28-38

 Time Sampled:
 1320

 Date Extracted:
 2-2-88

 Date Analyzed:
 3-1-38

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
Alpha-BHC	*	ND
Gamma-BHC	★	ИД
Beta-BHC	$\overline{0.4}$	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	ü.2	ND
Endosulfan I	_	D
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	 ★	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

...

 January 29, 1988
 P.O. No. 1

 March 4, 1988
 Job No. 3 AT077

Date Reported: March 4, 1988 DATE REISSUED: March 10, 1988

Date Received:

FOR: ES:Atlanta/Uolk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880220
Sample No.: VF1, B9, SS1. 0'
Date Sampled: 1-28-88

 Time Sampled:
 1320

 Date Extracted:
 2-2-88

 Date Analyzed:
 3-1-88

•	tection Limits	ANALYTICAL RESULTS
	ng/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	 ★	ND
2-Methyl-4,6-Dinitrophenol	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4/5-Trichlorophenol	0.66	ND

Analyst Legy

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received:

January 29, 1988

P.O. No.:

Date Reported: March 4, 1988

Job No. : AT077

FOR:

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880215 Lab Number:

Sample No.:

UF1, B9, SS2, 3.51

Date Sampled: Time Sampled: Date Extracted:

Date Analyzed:

1-28-88 1350 2-2-88

3-1-88

Compound Detection ANALYTICAL RESULTS

	imits ig/kg	mg/kg	
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.65	ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ethe		ND	
N-Nitrosodi-n-propyl amine		ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)methane	0.66	ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	ND	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Date Received: January 29, 1988 P.O. No.: Date Reported: March 4, 1988 Job No. : AT077

ES: Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880215

UF1, B9, SS2, 3.5' Sample No.:

Date Sampled: 1-28-88 Time Sampled: 1350 Date Extracted: 2-2-88 Date Analyzed: 3-1-88

Compound !	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl et!	her 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthala	ate 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ethe	er 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND .
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil (continued)

 Date Received:
 January 29, 1988
 P.O. No.:

 Date Reported:
 March 4, 1988
 Job No.:
 AT027

Page 3 of 5

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880215

Sample No.: UF1, B9, SS2, 3.5'

Date Sampled: 1-28-88
Time Sampled: 1350
Date Extracted: 2-2-88
Date Analyzed: 3-1-88

Compound	Detection Limits	Analytical Results
	mg/kg	mg/kg
Acetophenone		ND
Aniline	*	ND
4-Aminobiphenyl	*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	*	ND
7,12-Dimethylbenz(a)anthr	acene*	ND
a-,a-Dimethylphenethylam;	ine*	ND
Diphenylamine	*	ND
1,2-Diphenylhydrazine	*	ND
Ethyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND .
Methyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	*	ND
2-Naphthylamine	*	ND
2-Nitroaniline	3 . 3	ND
3-Nitroaniline	3 .3	ND
4-Nitroaniline	3 . 3	ND
N-Nitroso-di-n-butylamine	·*	ND
N-Nitrosopiperidine	*	ND
Pentachlorobenzene	*	ND
Pentachloronitrobenzene	*	ND
Phenacetin	*	ND
2-Picoline	*	ND
Pronamide	*	ND
1,2,4,5-Tetrachlorobenzer	ne*	ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs ~ SW 3270 Matrix: Soil

Date Received: January 29, 1988

P.O. No.:

Date Reported: March 4, 1988

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880215

UF1, B9, SS2, 3.5'

Sample No.:
Date Sampled:
Time Sampled:
Date Extracted:

1-28-88 1350 2-2-88

Date Analyzed: 3-1-88

Compound Detection ANALYTICAL RESULTS

Our pour la	Limits mg/kg	mg/kg	
Alpha-BHC	*	ND	
Gamma-BHC	*	ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	*	ND	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	*	ND	
Endosulfan II	*	ND	
4,4'-DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	*	ND	
Endrin Ketone	*	ND	
Chlordane	4.0	ND	
Methoxychlor	*	ND	
Toxaphene	4.0	ND	
Aroclor-1016	4.0	ND	
Aroclor-1221	4.0	ND	
Aroclor-1232	4.0	ND	
Aroclor-1242	4.0	ND	
Aroclor-1248	4.0	ND	
Aroclor-1254	4.0	ND	
Aroclor-1260	4.0	NĎ	

^{*} EPA has not yet determined detection limits for these compounds.

Date Received:

January 29, 1988

P.O. No.:

Date Reported:

March 4, 1988

Job No. : AT027

ES: Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329

380215

UF1, B9, SS2, 3.5

Sample No.: Date Sampled:

Lab Number:

1-28-88

Time Sampled:

1350

Date Extracted:

2-2-88

Date Analyzed:

3-1-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Pheriol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

Analyst

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

Date Received: January 29, 1988 Date Reported: March 4, 1988 DATE REISSUED: March 10, 1988

Job No. - AT077

ATTN: Mr. Jim Duncan

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880216

UF1, B9, SS3, 8.5 Sample No.:

Date Sampled: 1-28-88 Time Sampled: 1415 Date Extracted: 2-2-38 Date Analyzed: 3-1-88

Detection ANALYTICAL RESULTS Limits mg/kg mg/kg 1,3-Dichlorobenzene 0.66
1,4-Dichlorobenzene 0.66
Hexachloroethane 0.66
Bis(2-chloroethyl)ether 0.66
1,2-Dichlorobenzene 0.66
N-Nitrosodimethylamine 2.5 ND ND ND ND ND Bis(2-chloroisopropyl)ether 0.66 ND ND N-Nitrosodi-n-propyl amine 0.66 Hexachlorobutadiene 0.66 1,2,4-Trichlorobenzene 0.66 Nitrobenzene 0.66 ND ND 0.66 ND Nitrobenzene Isophorone 0.66 ND v. 66 ND Naphthalene Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ИD 0.66 ND Acenaphthylene 0.66 Acenaphthene ND 0.66 0.66 Dimethyl phthalate ND 2,6-Dinitrotoluene ND 0.66 ND Fluorene 2,4-Dinitrotoluene 0.66
Diethyl phthalate 0.66 ND 1.0 N-Nitrosodiphenylamine 0.66 ND Hexachlorobenzene 0.66 ND

page 2 of S

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

ate Received: January 29, 1988 ate Reported: March 4, 1988

ample No.

ate Sampled: ime Sampled: March 10, 1988

Job No. : ATUZZ

ATE REISSUED:

ES: Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

idress: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ab Number: 880216

OF1, B9, SS3, 8.5'

1-28-88 1415 2-2-88

ate Extracted: 3-1-88 ate Analyzed:

ombeauq	Detection Limit	ANALYTICAL RESULTS
	mg∕kg	mg/kg
henanthrene	0.66	ND
nthracene	0.66	ND
ibutyl phthalate	0.66	ND
luoranthene	0.66	ND
-Chlorophenyl phenyl et	her 0.66	ND
yrene	0.66	ND
utyl Benzyl phthalate	0.66	ND
is(2-ethylhexyl) phthal	ate 0.66	ND
hrysene	0.66	ND
-Bromophenyl phenyl eth	er 0.66	ND
enzo(a)anthracene		ND
i-n-octylphthalate	0.66	ND '
enzo(b)fluoranthene		ND
enzo(k)fluoranthene	0.66	ND
enzidine	6.0	ND
,3'-Dichlorobenzidine	1.3	ND
śnzo(a)pyrene	0.66	ND
ndeno(1,2,3-cd)pyrene	0.66	ND
ibenzo(a,h)anthracene		ND
enzo(ghi)perylene	0.66	ND
erzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix Soil (continued)

Page 3 of 5

Pate Received: January 29, 1988 P.O. No.:

Date Reported: March 4, 1988 Job No.: AT077

DATE REISSUED: March 10, 1988

For: ES:Atlanta Volk Field ANGB ATTN Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

 Lab Number
 \$80216

 Sample No.:
 0F1, B9, SS3, 8.5;

 Date Sampled:
 1-28-88

 Time Sampled:
 1415

 Date Extracted:
 2-2-88

 Date Analyzed:
 3-1-88

Compound Detection Analytical Results Limits mg∠kg mg∞kg Acetophenone ND Aniline ND 4-Aminobiphenyl 4-Chloroaniline 1-Chloronaphthalene Dibenzofuran ND ND ND 0.66 ND p-Dimethylaminoacobenzene --* MD 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenylamine ND 1,2-Diphenylhydrazine ND Ethyl methanesulfonate ND 3-Methylcholanthrene ND Methyl methanesulfonate ND 3-Methylcholanthrene 2-Methylnaphthalene ND 0.66 ND 1-Naphthylamine ND 2-Naphthylamine ND 3.3 2-Nitroaniline ND 3-Nitroaniline 3.3 ND 4-Nitroaniline 3.3 ND N-Nitroso-di-n-butylamine ND N-Nitrosopiperidine Pentachlorobenzene ND ND Fentachloronitrobenzene ND ND Phenacetin 2-Picoline ND Pronamide ND 1,2,4,5-Tetrachlorobenzene ND

^{*}EPA has not yet determined detection limits for these compounds E-299

Priority Pollutant Analysis Pesticides and PCBs - SW 9270 Matrix: Soil

page + of E

Date Received: C Date Reported: D DATE REISSUED 1	January 29, 1988 March 4, 1988 March 10, 1988	P.O. No
Address: 57 Execu	ta/Uolk Field ANGB tipe Park S.E., Suite Georgia 30329	ATTN:Mr. Jim Duncan 590
Lab Number: Sample No.: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		880216 UF1, B9, SS3, 8.5' 1-28-88 1415 2-2-88 3-1-88
Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
Alpha-BHC Gamma-BHC Beta-BHC Heptachlor Delta-BHC Aldrin Heptachlor epoxide Endosulfan I Dieldrin 4,4'-DDE Endrin Endosulfan II 4,4'-DDT Endosulfan Sulfate Endrin aldehyde Endrin Ketone Chlordane Methoxychlor Toxaphene Aroclor-1016 Aroclor-1221 Aroclor-1232	0.3 0.6 * * 0.3 0.5	222222222222222222222222222222222222222
Aroclor-1242 Aroclor-1248 Aroclor-1254	4.0 4.0 4.0	ND ND ND

4.0

Aroclor-1260

ND

⁺ EPA has not yet determined detection limits for these compounds.

ATOZZ

Job No.

Matrix: Soil

Date Received: January 29, 1988 Date Reported: March 4, 1988

DATE REISSUED: March 10, 1988

FOR ES: Atlanta/Oolk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number 880216 Sample No. UF1, B9, SS3, 8.51 Date Sampled: 1-28-88 Time Sampled: 1415 Date Extracted: 2-2-88

Date Analyzed: 3-1-88

	etection Limits	ANALYTICAL RESULTS
· F	ng/kg	mg∕kg
2-Chlorophenol	0.56	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	. ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3 . 3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitrophenol	L 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ИD
2,4,5-Trichlorophenol	0.66	ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 . Matrix: Soil

Date Received: February 10, 1988
Date Reported: March 15, 1988

P.O. No.: Job No. : AT077

FOR: ES: Atlanta / Volk Field ANGB

ATTN: Mr. Jim Duncan Address: 57 Executive Park S.E., Sqite 590

Atlanta, Georgia 30329

880289 Lab Number:

Sample No.: UF1 B-10 SS1, 0.5'

Date Sampled: 2-9-88 Time Sampled: 1015 Date Extracted: 2-17-88 Date Analyzed: 3-8-88

Detection ANALYTICAL RESULTS Compound Limits mg/kg mg/kg 1,3-Dichlorobenzene 0.66 1,4-Dichlorobenzene 0.66 ND 1,4-Dichlorobenzene
Hexachloroethane ND Hexachloroethane 0.66
Bis(2-chloroethyl)ether 0.66
1,2-Dichlorobenzene 0.66
N-Nitrosodimethylamine 2.5 ND ND ND ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 1,2,4-Trichlorobenzene 0.66 ND ND ND 0.66 Nitrobenzene ND Isophorone 0.66 0.66 ND Naphthalene Bis(2-chloroethoxy)methane 0.66 ND ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 Acenaphthylene Acenaphthene 0.66 ND 0.66 ND Dimethyl phthalate 2,6-Dinitrotoluene 0.66 ND ND 0.66 ND 0.66 Fluorene 2,4-Dinitrotoluene 0.66
Diethyl phthalate 0.66
N-Nitrosodiphenylamine 0.66 ND ND ND ND Hexachlorobenzene 0.66

Priority Pollutant Analysis Base Neutrals - SW 8220 Matrix: Soil (continued)

Date Received: February 10, 1988
Date Reported: March 15, 1988 P.O. No.:

Job No. : AT077

FOR: ES:Atlanta/Oolk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880289

UF1 B-10 SS1, 0.5' Sample No.:

Date Sampled: 2-9-38 Time Sampled: 1015 2-17-88 Date Extracted: Date Analyzed: 3-8-88

Date Hidlyzed		3-0-50
Compound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl e		ND
Pyrene	0.66	ND
Butyl Benzyl phthalate		ND
Bis(2-ethylhexyl) phtha		ND
Chrysene	0.66	ND
4-Bromophenyl phenyl et		ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate		ND
Benzo(b)fluoranthene		ND
Benzo(k)fluoranthene		ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine		ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene		ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND
• • • • • • • • • • • • • • • • • • •	•	

Priority Pollutant Analysis Base Neutrals - SW 8270

Page 3 of 5

Matrix: Soil (continued)

Date Received: February 10, 1988 P.O. No. Date Reported: March 15, 1988 Job No. · AT077

ATTN: Mr. Jim Duncan For: ES:Atlanta/Volk Field ANGB

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 380289

Sample No.: UF1 B-10 SS1, 0.5'

Date Sampled: 2-9-88 Time Sampled: 1015 2-17-88 Date Extracted: 3-8-88 Date Analyzed:

Compound Detection Analytical Results Limits mg/kg mg/kq --* Acetophenone ND --* --* Aniline ND 4-Aminobiphenyl 4-Chloroaniline ND 1.3 ND 1-Chloronaphthalene --* ND 0.66 ND Dibenzofuran p-Dimethylaminoazobenzene ND ND 7,12-Dimethylbenz(a)anthracene --* a-,a-Dimethylphenethylamine --* ND Diphenulamine ND ND 1,2-Diphenulhudrazine ND Ethyl methanesulfonate ND 3-Methylcholanthrene Methyl methanesulfonate ND 3-Methylcholanthrene ND 2-Methylnaphthalene 0.66 ND --* ND 1-Naphthylamine --* ND 2-Naphthylamine 3.3 ND 2-Nitroaniline ND 3-Nitroaniline 3.3 3.3 ND 4-Nitroaniline N-Nitroso-di-n-butylamine ND N-Nitrosopiperidine ND ND Pentachlorobenzene | ND Pentachloronitrobenzene ND Phenacetin 2-Picoline ND --* ND Pronamide ND 1,2,4,5-Tetrachlorobenzene

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270

Matrix: Soil

P.O. No.: Date Received: February 10, 1988 Date Reported: March 15, 1988 Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:	880289
Sample No.:	UF1 B-10 SS1, 0.5'
Date Sampled:	2-9-88
Time Sampled:	1015
Date Extracted:	2-17-98
Date Analyzed:	3-8-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg∕kg	mg/kg
Alpha-BHC	~-*	ND
Gamma-BHC	*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received:

February 10, 1988

P.O. No.:

Pate Reported: March 15, 1988

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880289

Sample No.:

UF1 B-10 SS1, 0.5'

Date Sampled: Time Sampled: 2-9-88

Date Extracted:

1015 2-17-88

Date Analyzed:

3-8-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	~-*	ND
2-Methyl-4,6-Dinitropheno	ol 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachloropheno	1*	ND
2,4,5-Trichlorophenol	0.66	ND

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: February 10, 1988 P.O. No.:

Job No. : AT077 Date Reported: March 15, 1988

ATTN: Mr. Jim Duncan

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880290

Sample No.: UF1 B-27 SS1, 0.5'

Date Sampled: 2-9-88 Time Sampled: 1015 Date Extracted: 2-17-88 3-8-88 Date Analyzed:

Compound Detection ANALYTICAL RESULTS
Limits Limits mg/kg mg/kg 1,3-Dichlorobenzene 0.66
1,4-Dichlorobenzene 0.66
Hexachloroethane 0.66
Bis(2-chloroethyl)ether 0.66
1,2-Dichlorobenzene 0.66
N-Nitrosodimethylamine 2.5 ND ND ND ND ND ND Bis(2-chlorossopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND 0.66 ND Hexachlorobutadiene 0.66 ND 1,2,4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone ND 0.66 Naphthalene Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentad?ene 0.66 ND ND Acenaphthylene 0.66 0.66 ND Acenaphthene Dimethyl phthalate 2,6-Dinitrotoluene 0.66 ND 0.66 ND ND Flucrene 0.66 2,4-Dinitrotoluene Diethyl phthalate 0.66 ND 0.66 ND N-Nitrosodiphenylamine 0.66 ND Hexachlorobenzene 0.66 ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received:

February 10, 1988

Date Reported: March 15, 1988

FOR:

ES: Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Lab Number:

Sample No.:

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880290

UF1 B-27 SS1, 0.51

2-9-88

Date Sampled: Time Sampled:

1015

Date Extracted:

2-17-88

Date Analyzed:

3-8-88

Compound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl et	ther 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phtha.	late 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl eti	her 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil (continued)

February 10, 1988 P.O. No.: Date Received: February 10, 19 Date Reported: March 15, 1988 Job No. : AT027

Page 3 of 5

ES:Atlanta/Uolk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Date Analyzed:

880290 Lab Number: UF1 B-27 SS1, 0.51 Sample No.: Date Sampled: 2-9-88 Time Sampled: 1015 2-17-88 Date Extracted:

Analytical Results Detection Compound Limits

3-8-88

	mg/kg	mg/kg	
Acetophenone	*	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	1.3	ND	
1-Chloronaphthalene	*	ND	
Dibenzofuran	0.66	ND	
p-Dimethylaminoazobenzene	*	ND	
7,12-Dimethylbenz(a)anthrac	ene*	ND	
a-,a-Dimethylphenethylamine	·*	ND	
Diphenylamine	*	ND	
1,2-Diphenylhydrazine	*	ND	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	0.66	ND	
1-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	3.3	ND	
3-Nitroaniline	3.3	ND	
4-Nitroaniline	3.3	ND	•
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	 ★	ND	
Pentachloronitrobenzene	*	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzene	*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: February 10, 1988
Date Reported: March 15, 1988

FOR: ES:Atlanta/Oolk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Sqite 590

Atlanta, Georgia 30329

Date Analyzed:

Lab Number: 880290 UF1 B-27 SS1, 0.5' Sample No :: Date Sampled: 2-9-88 Time Sampled: 1015 2-17-88 Date Extracted:

Compound Detection ANALYTICAL RESULTS Limits mg/**kg** mg/kg Alpha-BHC --* ND Gamma-BHC ND Beta-BHC 0.4 ND Heptachlor 0.2 ND Delta-BHC 0.3 ND Aldrin 0.2 ND Heptachlor epoxide Endosulfan I ND 0.2 ND __★ 0.3 ND Dieldrin 4,4'-DDE 0.6 ND --* ND Endrin Endosulfan II --* ND 4,4'-CDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde ND --* ND Endrin Ketone Chlordane 4.0 ND ND Methoxychlor --* 4.0 ND Toxaphene Aroclor-1016 4.0 ND Aroclor-1221 4.0 ND Araclar-1232 4.0 ND Aroclor-1242 4.0 ND Aroclor-1248 4.0 ND ND Aroclor-1254 4.0 ND Araclor-1260 4.0

.

3-8-88

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: February 10, 1988 Date Reported: March 15, 1988

P.O. No.: Job No. : AT077

ES:Atlanta/Oolk Field ANGB Address:57 Executive Park S.E., Suite 590 ATTN: Mr. Jim Duncan

Atlanta, Georgia 30329

Lab Number:

880290

Sample No.:

UF1 B-27 SS1, 0.5'

ND

ND

ND

ND

ND

ND

Date Sampled: Time Sampled:

2-9-88 1015

Date Extracted: Date Analyzed:

Pentachlorophenol

3- & 4-Methylphenol

2,4,5-Trichlorophenol

2,3,4,6-Tetrachlorophenol

4-Nitrophenol

Benzoic Acid 2-Methylphenol 2-17-88 3-8-88

Compound	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND.
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND

3.3 3.3

3.3

0.66

0.66

--*

0.66

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless NOTE: other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: February 10, 1988

P.O. No.:

Date Reported: March 15, 1988

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590

ATTN: Mr. Jim Duncan

Atlanta, Georgia 30329

Lab Number:

880291

Sample No.:

UF1 B-10 SS2, 3.5'

Date Sampled:

2-9-88

Time Sampled: Date Extracted:

1045 2-17-88

Date Analyzed:

3-9-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg∕kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
		ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene		
N-Nitrosodimethylamine	2.5	ND
Bis(2-chlorossopropyl)e		ND
N-Nitrosodi-n-propyl am		· ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)meth	ane 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadie	ne 0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	DN
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: February 10, 1988
Date Reported: March 15, 1988 P.O. No.: Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880291

Sample No.: UF1 B-10 SS2, 3.5'

Date Sampled: 2-9-88 Time Sampled: 1045 2-17-88 Date Extracted: 3-9-88 Date Analyzed:

Compound Limit mg/kg mg∕kg Phenanthrene 0.66
Anthracene 0.66
Dibutyl phthalate 0.66
Fluoranthene 0.66 ND ND ND 4-Chlorophenyl phenyl ether 0.66 ND Pyrene 0.66
Butyl Benzyl phthalate 0.66 ND ND Bis(2-ethylhexyl) phthalate 0.66 ND ND Chrusene 4-Bromophenyl phenyl ether 0.66 ND Benzo(a)anthracene 0.66
Di-n-octylphthalate 0.66
Benzo(b)fluoranthene 0.66
Benzo(k)fluoranthene 0.66
Benzidine 6.0 ND ND ND ND 3,3'-Dichlorobenzidine 1.3
Benzo(a)pyrene ND ND 0.66 ND Indeno(1,2,3-cd)pyrene 0.66
Dibenzo(a,h)anthracene 0.66
Benzo(ghi)perylene 0.66
Benzyl Alcohol 1.3

ND ND ND ND

Detection ANALYTICAL RESULTS

Priority Pollutant Analysis Base Neutrals - SW 8270

Page 3 of 5

Matrix: Soil (continued)

Pate Received: February 10, 1988 P.O. No.:

Date Reported: March 15, 1988 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880291

Sample No.: UF1 B-10 SS2, 3.5'

Date Sampled: 2-9-88
Time Sampled: 1045
Date Extracted: 2-17-88
Date Analyzed: 3-9-88

Compound Detection Analytical Results Limits mg/kg mg/kg Acetophenone ND --* ND Aniline 4-Aminobiphenyl
4-Chloroaniline ND 1.3 ND 1-Chloronaphthalene --* ND 0.66 Dibenzofuran ND p-Dimethylamingazobenzene ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND ND Diphenylamine ND 1,2-Diphenylhydrazine Ethyl methanesulfonate ND ND 3-Methylcholanthrene ND Methyl methanesulfonate 3-Methylcholanthrene 2-Methylnaphthalene 1-Haphthylamine _-* ND 0.66 ND _-* ND 2-Naphthylamine 2-Nitroaniline 3-Nitroaniline 4-Nitroaniline ND 3.3 ND 3.3 ND 3.3 ND 4-Nitroaniline ND N-Nitroso-di-n-butylamine N-Nitrosopiperidine ND Pentachlorobenzene ND ND Pentachloronitrobenzene ND Phenacetin ND 2-Picoline ND Pronamide ND 1,2,4,5-Tetrachlorobenzene

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: February 10, 1988

P.O. No.:

Date Reported: March 15, 1988

Job No. : AT077

EOD: EC:O

FOR: ES:Atlanta/Volk Field ANGB

ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880291

Sample No. OF1 B-10 SS2, 3.5'

 Date Sampled:
 2-9-88

 Time Sampled:
 1045

 Date Extracted:
 2-17-88

 Date Analyzed:
 3-9-88

Compound Detection ANALYTICAL RESULTS
Limits
mg/kg mg/kg ------Alpha-BHC ND Gamma-BHC ND 0.4 ND Beta-BHC Heptachlor Delta-BHC 0.2 ND 0.3 ND 0.2 ND Aldrin 0.2 Heptachlor epoxide Endosulfan I ND --* ND Dieldrin 4,4'-DDE 0.3 ND 0.6 ND --* ND Endrin Endosulfan II ND 0.3 4,4'-DDD ND 4,4'-DDT 0.5 ND Endosulfan Sulfate Endrin aldehyde 0.6 ND --* ND Endrin Ketone --* ND 4.0 ND Chlordane Methoxychlor Toxaphene --* ND 4.0 ND Aroclor-1016 Aroclor-1221 4.0 ND 4.0 ND ND 4.0 Aroclor-1232 Aroclor-1242 4.0 ND 4.0 ND Aroclor-1248 Aroclor-1254 4.0 ND Aroclor-1260 4.0 ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received:

February 10, 1988

P.O. No.:

Date Reported:

March 15, 1988

Job No. : AT077

EOD.

FOR: ES:Atlanta/Uolk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880291

UF1 B-10 SS2, 3.5'

Sample No.:
Date Sampled:
Time Sampled:
Date Extracted

Lab Number:

2-9-88 1045 2-17-88

Date Extracted: Date Analyzed:

3-9-88

- L	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenoi	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol		ND
2,4,5-Trichlorophenol	0.66	ND

Analyst Lug

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: February 10, 1988

Date Reported: March 15, 1988

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880292

UF1 B-10 SS3, 8.51 Sample No :

Date Sampled: 2-9-88 Time Sampled: 1125 Date Extracted: 2-17-88 3-9-88 Date Analyzed:

	etection Limits	ANALYTICAL	RESULTS
1	mg/kg	mg/1	<g< th=""></g<>
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.66	ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ethe		ND	
N-Nitrosodi-n-propyl amine		ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)methand		ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	DN	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Date Received: February 10, 1988 Date Reported: March 15, 1988

P.O. No.:

Job No. : AT077

Lab Number:

Sample No.

Date Sampled:

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880292

UF1 B-10 SS3, 8.5'

2-9-88 1125

Time Sampled: Date Extracted:

2-17-88 3-9-88 Date Analyzed:

Compound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl s		ND
Pyrene Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phtha		ND
Chrysene	0.66	ND
4-Bromophenyl phenyl et		ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil (continued)

Date Received: February 10, 1988 Date Reported: March 15, 1988

P.O. No.: Job No. : AT077

Page 3 of 5

For: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880292

Sample No.:

UF1 B-10 SS3, 3.5'

Date Sampled: Time Sampled:

2-9-88 1125

Date Extracted: Date Analyzed:

2-17-38 3-9-88

Compound	Detection Limits	Analytical Results	
	mg/kg	mg/kg	
Acetophenone	*	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	1.3	ND	
1-Chloronaphthalene	*	ND	
Dibenzofuran	0.66	ND	
p-Dimethylaminoazobenzene	*	ND	
7,12-Dimethylbenz(a)anthr		ND	
a-,a-Dimethylphenethylami		ND	
Diphenylamine	*	ND	
1,2-Diphenylhydrazine	*	ND	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	0.66	ND	
1-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	3.3	ND	
3-Nitroaniline	3 . 3	ND	
4-Nitroaniline	3.3	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzen	e*	14 D	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: February 10, 1988
Date Reported: March 15, 1988 FOR: ES Atlanta/Uolk Field ANGB ATTN:Mr Jim Duncan Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 880292 Lab Number: UF1 B-10 SS3, 8.5 Sample No.: Date Sampled: 2-9-88 1125 Time Sampled: Date Extracted: 2-17-88 Date Analyzed: 3-9-88 ______ Compound Detection ANALYTICAL RESULTS Limits mg/kg mg∕kg ______ Alpha-BHC ND Gamma-BHC Beta-BHC ND 0.4 0.2 ND Beta-bno Heptachlor Delta-BHC ND 0.3 ND 0.2 ND Heptachlor epoxide 0.2
Endosulfan I --* ND ND Dieldrin 4,4'-DDE Endrin 0.3 ND 0.6 ND --* ND Endosulfan II 4,4'-DDD 4,4'-DDT --* ND 0.3 ND 0.5 ND 4,4'-DDT 0 6 Endosulfan Sulfate Endrin aldehyde ND --* ND --* Endrin Ketone ND 4.0 ND Chlordane 4.0 4.0 Methoxychlor ND ND Toxaphene Aroclor-1016 ND 4.0 ND Aroclor-1221 4.0 ND Aroclor-1232 4.0 ND Aroclor-1242 4.0 Aroclor-1248 ND

4.0

4.0

Aroclor-1254

Aroclor-1260

ND

ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: February 10, 1988 P.O. No.:

Date Reported:

March 15, 1988

Job No. · AT077

FOR: ES: Atlanta / Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 380292

UF1 B-10 SS3, 8.5° Sample No.:

Date Sampled: 2-9-88 Time Sampled: 1125 Date Extracted: 2-17-88

Date Analyzed: 3-9-88

Compound	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg∕kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichloropherol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

February 10, 1988 Date Received:

Date Reported: March 15, 1988

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan FOR:

57 Executive Park S.E., Suite 590 Address:

Atlanta, Georgia 30329

880293 Lab Number:

UF1 8-11 SS1, 1.0' Sample No

Date Sampled: 2-9-88 1300 Time Sampled: 2-17-88 Date Extracted:

3-10-88 Date Analyzed:

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg ∕kg
1 2 Dishlarahanan	0.66	ND
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene Hexachloroethane	0.66	ND
		ND
Bis(2-chloroethyl)ether	0.66	
1,2-Dichlarobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND ND
Bis(2-chloroisopropyl)et		· -
N-Nitrosodi-n-propyl ami		ND NB
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)metha		ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadien		ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 980293

Sample No.: UF1 B-11 SS1, 1.0'

 Date Sampled:
 2-9-88

 Time Sampled:
 1300

 Date Extracted:
 2-17-88

 Date Analyzed:
 3-10-88

Compound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl et	her 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthal	ate 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl eth		ИD
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND ·
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Page 3 of 5 Base Neutrals - SW 8270 Matrix: Soil

(continued)

February 10, 1988 Date Received: P.O. No.: Date Reported: March 15, 1988 Job No. : AT077

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880293

Sample No.: UF1 B-11 SS1, 1.0'

Date Sampled: 2-9-88 Time Sampled: 1300 Date Extracted: Date Analyzed: 2-17-88 3-10-88

Compound Detection Analytical Results Limits mg/kg mg/kg Acetophenone --* ND Aniline
4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene --* ND ND 1.3 ND --* ND 0.66 Dibenzofuran ND p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenylamine
1,2-Diphenylhydrazine ND ND Ethyl methanesulfonate ND 3-Methylcholanthrene ND Methyl methanesulfonate ND 3-Methylcholanthrene
2-Methylnaphthalene
1-Naphthylamine
2-Naphthylamine
2-Nitroaniline
3-Nitroaniline
4-Nitroaniline ND 0.66 ND --* ND ND 3.3 ND 3.3 ND 3.3 ND N-Nitroso-di-n-butylamine ND N-Nitrosopiperidine Pentachlorobenzene ND ND Pentachloronitrobenzene ND Phenacetin ND 2-Picoline ND ND Pronamide 1,2,4,5-Tetrachlorobenzene ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 3270

Matrix: Soil

Date Received: February 10, 1988 Date Reported: March 15, 1988 P.O. No.: Job No. : ATUZZ

FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:	880293
Sample No.:	UF1 B-11 SS1, 1.0'
Date Sampled:	2-9-88
Time Sampled:	1300
Date Extracted:	2-17-88
Date Analyzed:	3-10-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
Alpha-BHC	*	ND
Gamma-BHC	*	ND
Beta-BHC	0.4	ND
Heptachlor	0 2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Date Received: February 10, 1988 Date Reported: March 15, 1988

Job No. - AT027

ES:Atlanta/Oolk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

380293

Lab Number: Sample No :

UF1 B-11 SS1, 1.01

Date Sampled: Time Sampled:

2-9-88 1300

Date Extracted: Date Analyzed:

2-17-88 3-10-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	l*	ND
2,4,5-Trichlorophenol	0.66	ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

Date Received: February 10, 1988 Date Reported: March 15, 1988

P.O. No.: Job No. : AT022

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880294 Lab Number:

UF1 B-11 SS2, 3.5' Sample No.:

Date Sampled: 2-9-88 Time Sampled: 1320 2-17-88 Date Extracted: 3-10-88 Date Analyzed:

Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg 1,3-Dichlorobenzene 0.66 ND
1,4-Dichlorobenzene 0.66 ND
Hexachloroethane 0.66 ND
Bis(2-chloroethyl)ether 0.66 ND
1,2-Dichlorobenzene 0.66 ND
N-Nitrosodimethylamine 2.5 ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 1,2,4-Trichlorobenzene 0.66 ND ND ND 0.66 Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 Hexachlorocyclopentadiene 0.66 ND ND Acenaphthylene 0.66 Acenaphthene 0.66 ND ND Dimethyl phthalate 0.66 2,6-Dinitrotoluene 0.66 ND ND Fluorene 0.66 ND 2,4-Dinitrotoluene 0.66
Diethyl phthalate 0.66
N-Nitrosodiphenylamine 0.66
Hexachlorobenzene 0.66 ND ND ND ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Date Received: February 10, 1988 P.O. No.: Job No. : AT077 Date Reported: March 15, 1988

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880294 Lab Number:

UF1 B-11 SS2, 3.5 Sample No.

Date Sampled: 2-9-88 1320 Time Sampled: 2-17-88 Date Extracted: Date Analyzed: 3-10-88

Compound De	etection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl eth	e: 0.66	ND
Pyrene	0.6 6	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthala	te 0.66	ND
Chrysene	0.66	· ND
4-Bromophenyl phenyl ethe	r 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 9270

Page 3 of 5

Matrix: Soil (continued)

For: ES Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

 Lab Number:
 880294

 Sample No.:
 0F1 B-11 SS2, 3.5'

 Date Sampled:
 2-9-88

 Time Sampled:
 1320

 Date Extracted:
 2-17-88

 Date Analyzed:
 3-10-88

Compound	Detection	Analytical	Results
	Limits		
	mg/kg	mg/kg	
Acetophenone	-	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	1.3	ND	
1-Chloronaphthalene	*	ND	
Dibenzofuran	0.66	ND	
p-Dimethylaminoazobenzene	*	ND	
ラ,12-Diméthylbenz(a)anthra	acene*	ND	
a-,a-Dimethylphenethylami		ND	
Diphenylamine	*	ND	
1,2-Diphenylhydrazine	*	ПN	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	0.66	ND	
1-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	3 .3	ND	
3-Nitroaniline	3 .3	ND	
4-Nitroaniline	3 .3	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzen	e*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

 Date Received:
 February 10, 1988
 P.O. No.:

 Date Reported:
 March 15, 1988
 Job No.:
 AT077

FOR: ES:Atlanta/Oolk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

 Lab Number:
 \$80294

 Sample No.:
 UF1 B-11 SS2, 3.5°

 Date Sampled:
 2-9-88

 Time Sampled:
 1320

Time Sampled: 1320
Date Extracted: 2-17-88
Date Analyzed: 3-10-88

Compound	Detection Limits mg∕kg	ANALYTICAL RESULTS mg/kg
Alpha-BHC	*	ND
Gamma-BHC	*	ND
Beta-BHC	$\overline{0}$ 4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	+ - +	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Araclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

 $[\]star$ EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: February 10, 1988

Date Reported: March 15, 1988

P.O. No.:

Job No. : AT077

FOR: ES:Atlanta/Oolk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

380294

Lab Number: Sample No.:

UF1 B-11 SS2, 3.5'

Pate Sampled:

2-9-88

Time Sampled:

1320

Date Extracted:

2-17-88

Date Analyzed: _____

3-10-88

Compound	Detection Limits	ANALYTICAL RESULTS
-	mg/kg 🏲	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ИD
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenal	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

*EPA has not yet determined detection limits for these compounds

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

February 10, 1988 P.O. No.: Date Received:

Date Reported: March 15, 1988 Job No. : AT077

FOR: ATTN: Mr. Jim Duncan ES: Atlanta/Volk Field ANGB

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880295

Sample No.: UF1 B-11 SS3, 8.5'

2-9-88 Date Sampled: Time Sampled: 1340 Date Extracted: 2-17-88 3-10-88 Date Analyzed:

Compound	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
4. 4. 8: -111	0.66	ND
1,3-Dichlorobenzene		ND
1,4-Dichlorobenzene	0.66	
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)eth		ND
N-Nitrosodi-n-propyl amin		ND
Hexachlorobutadiene	0 . 66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	_ ND
Isophorone	0.66	ND
Naphthalene	0.6 6	1.8
Bis(2-chloroethoxy)mether		ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Disthyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

Date Received: February 10, 1988 P.O. No.: Job No. : AT077 Date Reported: March 15, 1988

ES: Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Date Analyzed:

Lab Number: 880295 UF1 B-11 SS3, 8.5' Sample No.: Date Sampled: 2-9-88 Time Sampled: 1340 2-17-88 Date Extracted: 3-10-88

Compound Detection ANALYTICAL RESULTS

Limit mg/kg mg/kg 0.66 Phenanthrene ND 0.66 Anthracene ND Dibutyl phthalate ND 0.66 ND Fluoranthene 0.66 4-Chlorophenyl phenyl ether 0.66 ND 0.66 ND Pyrene ND 0.66 Butyl Benzyl phthalate Bis(2-ethylhexyl) phthalate 0.66 ND ND Chrysene 0.66 4-Bromophenyl phenyl ether 0.66 ND Benzo(a)anthracene Di-n-octylphthalate 0.66 ND ND 0.66 Benzo(b)fluoranthene 0.66 ND Benzo(k)fluoranthene 0.66 ND 6.0 ND Benzidine 1.3 ND 3,3'-Dichlorobenzidine 0.66 ND Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenzo(a,h)anthracene 0.66 ND 0.66 ND Benzo(ghi)perylene 0.66 ND Benzyl Alcohol 1.3 ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Page 3 of 5

(continued)

Date Received: February 10, 1988 P.O. No.:

Date Reported: March 15, 1988 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

3-10-88

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Date Analyzed:

Lab Number: 880295
Sample No.: VF1 B-11 SS3, 8.5'
Date Sampled: 2-9-88
Time Sampled: 1340
Date Extracted: 2-17-88

Compound Detection Analytical Results
Limits
mg/kg mg/kg mg/kg mg/kg Acetophenone ND --* Aniline ND Aniline
4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene --* ND 1.3 ND ND 0.66 ND Dibenzofuran p-Dimethylaminoazobenzene --* ND ND 7,12-Dimethylbenz(a)anthracene --* a-,a-Dimethylphenethylamine --* ND Diphenylamine ND 1,2-Diphenylhydrazine ND Ethyl methanesulfonate ND ND 3-Methylcholanthrene ND Methyl methanesulfonate 3-Methylcholanthrene 2-Methylnaphthalene ND --* 2.4 0.66 --* ND 1-Naphthylamine 2-Naphthylamine 2-Nitroaniline 3-Nitroaniline --* ND 3.3 ND 3.3 ND 3.3 4-Nitroaniline ND N-Nitroso-di-n-butylamine --* ND ND N-Nitrosopiperidine Pentachlorobenzene ND --+ ND Pentachloronitrobenzene Phenacetin ND 2-Picoline ND ND Pronamide ND 1,2,4,5-Tetrachlorobenzene --*

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: February 10, 1988 P.O. No.:

Date Reported: March 15, 1988 Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880295

VF1 B-11 SS3, 8.5' Sample No.:

Date Sampled: 2-9-88 Time Sampled: 1340

2-17-88 Date Extracted: 3-10-88 Date Analyzed:

### ### #### #########################	
Gamma-BHC _* ND Beta-BHC 0.4 ND Heptachlor 0.2 ND Delta-BHC 0.3 ND Aldrin 0.2 ND Heptachlor epoxide 0.2 ND Endosulfan I * ND Dieldrin 0.3 ND 4,4'-DDE 0.6 ND Endrin * ND Endosulfan II * ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
Beta-BHC 0.4 ND Heptachlor 0.2 ND Delta-BHC 0.3 ND Aldrin 0.2 ND Heptachlor epoxide 0.2 ND Endosulfan I * ND Dieldrin 0.3 ND 4,4'-DDE 0.6 ND Endrin * ND Endosulfan II * ND 4,4'-DDT 0.3 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
Beta-BHC 0.4 ND Heptachlor 0.2 ND Delta-BHC 0.3 ND Aldrin 0.2 ND Heptachlor epoxide 0.2 ND Endosulfan I * ND Dieldrin 0.3 ND 4,4'-DDE 0.6 ND Endrin * ND Endosulfan II * ND 4,4'-DDT 0.3 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
Delta-BHC 0.3 ND Aldrin 0.2 ND Heptachlor epoxide 0.2 ND Endosulfan I * ND Dieldrin 0.3 ND 4,4'-DDE 0.6 ND Endrin * ND Endosulfan II * ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
Delta-BHC 0.3 ND Aldrin 0.2 ND Heptachlor epoxide 0.2 ND Endosulfan I * ND Dieldrin 0.3 ND 4,4'-DDE 0.6 ND Endrin * ND Endosulfan II * ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
Heptachlor epoxide 0.2 ND Endosulfan I * ND Dieldrin 0.3 ND 4,4'-DDE 0.6 ND Endrin * ND Endosulfan II * ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
Endosulfan I * ND Dieldrin 0.3 ND 4,4'-DDE 0.6 ND Endrin * ND Endosulfan II * ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
Endosulfan I * ND Dieldrin 0.3 ND 4,4'-DDE 0.6 ND Endrin * ND Endosulfan II * ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
4,4'-DDE 0.6 ND Endrin * ND Endosulfan II * ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
Endrin * ND Endosulfan II * ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
Endrin * ND Endosulfan II * ND 4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
4,4'-DDD 0.3 ND 4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde * ND Endrin Ketone * ND Chlordane 4.0 ND Methoxychlor * ND	
4,4'-DDT 0.5 ND Endosulfan Sulfate 0.6 ND Endrin aldehyde* ND Endrin Ketone* ND Chlordane 4.0 ND Methoxychlor* ND	
Endosulfan Sulfate 0.6 ND Endrin aldehyde* ND Endrin Ketone* ND Chlordane 4.0 ND Methoxychlor* ND	
Endrin aldehyde* ND Endrin Ketone* ND Chlordane 4.0 ND Methoxychlor* ND	
Endrin Ketone* ND Chlordane 4.0 ND Methoxychlor* ND	
Chlordane 4.0 ND Methoxychlor* ND	
Methoxychlor* ND	
Toxaphene 4.0 ND	
Aroclor-1016 4.0 ND	
Aroclor-1221 4.0 ND	
Aroclor-1232 4.0 ND	
Aroclor-1242 4.0 ND	
Aroclor-1248 4.0 ND	
Aroclor-1254 4.0 ND	
Aroclor-1260 4.0 ND	

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270

Matrix: Soil

P.O. No.: Date Received: February 10, 1988

March 15, 1988 Job No. : AT077 Date Reported:

ATTN: Mr. Jim Duncan ES: Atlanta/Volk Field ANGB

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880295 Lab Number:

Sample No.: VF1 B-11 SS3, 8.5'

Date Sampled: 2-9-88 1340 Time Sampled: 2-17-88 Date Extracted: 3-10-88 Date Analyzed:

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachloropheno	1*	ND
2,4,5-Trichlorophenol	0.66	ND

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless NOTE: other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: February 10, 1988 Date Reported: March 15, 1988

P.O. No.:

Job No. : AT027

ATTN: Mr. Jim Duncan

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number 880296

Sample No.: UF1 B-12 SS1, 1.0'

Date Sampled: 2-3-88 Time Sampled: 1400 Date Extracted: Date Analyzed: 2-17-88 3-10-88

Compound Detection ANALYTICAL RESULTS Limits mg∕kg mg/kg 1,3-Dichlorobenzene 0.66
1,4-Dichlorobenzene 0.66
Hexachloroethane 0.66
Bis(2-chloroethyl)ether 0.66 ND ND ND 1,2-Dichlorobenzene 0.66 N-Nitrosodimethylamine 2.5 ND ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND 0.66 Hexachlorobutadiene ND 0.66 1,2,4-Trichlorobenzene ND Nitrobenzene 0.66 ND Isophorone 0.66 ND Naphthalene 0.66 ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthene
Dimethyl phthalate
2,6-Dinitrotoluca 0.66 ND 0.66 ND 0.66 ND 0.66 2,6-Dinitrotoluene ND Fluorene 0.66 ND 2,4-Dinitrotoluene 0.66
Diethyl phthalate 0.66
N-Nitrosodiphenylamine 0.66 ND ND ND ND Hexachlorobenzene 0.66

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received:

February 10, 1988

Date Reported: March 15, 1988

P.O. No.:

Job No. : AT077

Lab Number:

Sample No.: Date Sampled:

Time Sampled:

Benzyl Alcohol

ES:Atlanta/Volk Field ANGB FOR:

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

380296

UF1 B-12 SS1, 1.0'

2-9-88

1400 2-17-98

Date Extracted: Date Analyzed:

3-10-88

ND

______ Compound Detection ANALYTICAL RESULTS Limit mg/kg mg/kg Phenanthrene 0.66 ND 0.66 ND Anthracene Dibutyl phthalate 0.66 ND 0.66 ND Fluoranthene ND 4-Chlorophenyl phenyl ether 0.66 ND 0.66 Pyrene ND Butyl Benzyl phthalate 0.66 Bis(2-ethylhexyl) phthalate 0.66 ND ND 0.66 4-Bromophenyl phenyl ether 0.66 ND ND Benzo(a)anthracene 0.66 ND Di-n-octulphthalate 0.66 Benzo(b)fluoranthene Benzo(k)fluoranthene 0.66 ND 0.66 ND ND Benzidine 6.0 ND 3,3'-Dichlorobenzidine 1.3 ND 0.66 Benzo(a)pyrene 0.66 ND Indeno(1,2,3-cd)pyrene ND 0.66 Dibenzo(a,h)anthracene Benzo(ghi)perylene 0.66 ND

1.3

(continued)

Date Received: February 10, 1988
Pate Reported: March 15, 1988 P.O. No.: .,......

Job No. : AT077

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 530

Atlanta, Georgia 30329

Pronamide

1,2,4,5-Tetrachlorobenzene

Lab Number: 880296

Sample No.: UF1 B-12 SS1, 1.0'

Date Sampled: 2-9-88 Time Sampled: 1400 Date Extracted: 2-17-88 Date Analyzed: 3-10-88

Detection Analytical Results Limits mg/kg mg/kg Acetophenone Aniline --* ND --* ND Aniline
4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene
Dibenzofuran --* ND 1.3 --* ND ND 0.66 ND p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenylamine ND Diphenylamine
1,2-Diphenylhydrazine ND Ethyl methanesulfonate 3-Methylcholanthrene ND ND Methyl methanesulfonate --*
3-Methylcholanthrene --*
2-Methylnaphthalene 0.66
1-Naphthylamine --*
2-Naphthylamine 3.3
3-Nitroaniline 3.3 ND ND ND ND ND 3.3 3.3 ND 3-Nitroaniline ND 4-Nitroaniline ND 3.3 N-Nitroso-di-n-butylamine --* ND N-Nitrosopiperidine Pentachlorobenzene ND --* ND Pentachloronitrobenzene ND Phenacetin ND 2-Picoline ND

ND

ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: February 10, 1988 Date Reported: March 15, 1988 P.O. No.:

Job No. : AT077

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880296 Lab Number:

UF1 B-12 SS1, 1.0' Sample No.:

Date Sampled: 2-9-88 Time Sampled: 1400 2-17-88 Date Extracted:

Pate Analyzed: 3-10-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
Alpha-BHC	*	ND
Gamma-BHC	 *	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	υ.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: February 10, 1988 Date Reported: March 15, 1988

2,3,4,6-Tetrachlorophenol --*

2,4,5-Trichlorophenol

P.O. No.:

Job No. : ATU77

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880296

Sample No.:

UF1 B-12 SS1, 1.0'

ND

ND

Date Sampled: Time Sampled: 2-9-88 1400

Date Extracted: Date Analyzed:

2-17-88 3-10-88

		ANALYSTAAL PROVING
<u> </u>	tection umits	ANALYTICAL RESULTS
	g/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND

0.66

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 3270 Matrix: Soil

Date Received: February 10, 1988 Date Reported: March 15, 1988

Job No. : AT022

FOR:

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880297

Sample No.:

UF1 B-12 SS2, 3.5'

Date Sampled: Time Sampled: 2-9-88 1500

Date Extracted:

2-17-88

Date Analyzed:

3-10-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	П
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)et	her 0.66	ND
N-Nitrosodi-n-propyl ami	ne 0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
'laphthalene	0.66	ND
Bis(2-chloroethoxy)metha	ine 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadier	ne 0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	П
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: February 10, 1988 Date Reported: March 15, 1988

P.O. No.:

March 15, 1988 Job No. : AT077

FOR: ES:Atlanta/Oolk Field ANGB Address: 57 Executive Park S.E., Suite 590 ATTN: Mr. Jim Duncan

Atlanta, Georgia 30329

Lab Number: 880297

Sample No.: UF1 B-12 SS2, 3.5'

 Date Sampled:
 2-9-88

 Time Sampled:
 1500

 Date Extracted:
 2-17-88

 Date Analyzed:
 3-10-88

Compound Detection ANALYTICAL RESULTS

Combodud	Limit	HNHLITICHL RESULTS	
	mg/kg	mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ethe	r 0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalat	e 0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether		ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis Page 3 of 5 Base Neutrals - SW 8270

Matrix: Soil (continued)

Date Received: February 10, 1988 P.O. No.: Date Reported: March 15, 1988 Job No. : ATU77

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

3-10-88

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Date Analyzed:

Lab Number: 880297 Sample No.: UF1 B-12 SS2, 3.5' Date Sampled: 2-9-88 Time Sampled: 1500 Date Extracted: 2-17-88

Compound Detection Analytical Results Limits mg/kg mg/kg Acetophenone ND --* Aniline ND 4-Aminobiphenyl 4-Chloroaniline --* ND 1.3 ND 1-Chloronaphthalene --* ND 0.66 ND Dibenzofuran p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND ND a-,a-Dimethylphenethylamine --* Diphenylamine ND 1,2-Diphenylhydrazine ND --* Ethyl methanesulfonate ND 3-Methylcholanthrene ND Methyl methanesulfonate ND 3-Methylcholanthrene 2-Methylnaphthalene --* ND 0.66 ND --* l-Naphthylamine ND --* 2-Naphthylamine ND 2-Nitroaniline 3.3 ND 3.3 3-Nitroaniline ND 4-Nitroanıline 3.3 ND N-Nitroso-di-n-butylamine --* ND N-Nitrosopiperidine _-* ND Pentachlorobenzene --* ND --***** Pentachloronitrobenzene ND --* ND Phenacetin 2-Picoline --* ND --* Pronamide ND ND 1,2,4,5-Tetrachlorobenzene __*

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: February 10, 1988

P.O. No.:

Date Reported: March 15, 1988

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880297

Sample No.:

UF1 B-12 SS2, 3.5'

Date Sampled: Time Sampled:

2-9-88 1500

Date Extracted:

2-17-88

3-10-88 Date Analyzed: ANALYTICAL PESHITTS

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
Alpha-BHC	*	ND
Gamma-BHC	*	ND
Beta-BHC	$\overline{0.4}$	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	* ,	ND
Endrin Ketone	*	ND
Chlordane	4.0 *	ND
Methoxychlor		ND NB
Toxaphene	4.0 4.0	ND
Aroclor-1016	4.0	ND ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242 Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND
HL 00101-1200	٦. ٥	170

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 3270 Matrix: Soil

Date Received:

February 10, 1988

P.O. No.:

Date Reported: March 15, 1988

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: Sample No.:

880297

Date Sampled:

UF1 B-12 SS2, 3.5

Time Sampled:

2-9-88 1500

Date Extracted: Date Analyzed:

2-17-88 3-10-88

Compound

Compound	Detection Limits	ANALYTICAL RESULTS	
	mg/kg	mg/kg	
2-Chlorophenol	0.66	ND	-
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	
2,4-Dimethylphenol	0.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenol	3.3	ND	
2,6-Dichlorophenol	*	ND	
2-Methyl-4,6-Dinitrophene	1 3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3 3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND	
2,3,4,6-Tetrachloropheno	1*	ND	
2,4,5-Trichlorophenol	0.66	ND	

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

P.O. No.: Date Received: February 10, 1988

Date Reported: March 15, 1988 Job No. : AT077

ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880298

Sample No.: UF1 B-12 SS3, 8.5'

Date Sampled: 2-9-88 Time Sampled: 1540 Date Extracted: 2-17-88 3-10-88 Date Analyzed:

Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg 1,3-Dichlorobenzene 0.66
1,4-Dichlorobenzene 0.66
Hexachloroethane 0.66
Bis(2-chloroethyl)ether 0.66
1,2-Dichlorobenzene 0.66
N-Nitrosodimethylamine 2.5 ND ND ND ND ND ND Bis(2-chloroisopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 1,2,4-Trichl_obenzene 0.66 ND ND 0.66 0.66 Nitrobenzene ND Isophorone ND Naphthalene ND Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND 0.66 ND Dimethyl phthalate 2,6-Dinitrotoluene 0.66 ND 0.66 ND Fluorene 0.66 ND 2,4-Dinitrotoluene 0.66
Diethyl phthalate 0.66
N-Nitrosodiphenylamine 0.66
Hexachlorobenzene 0.66 ND ND ND ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: February 10, 1988 Date Reported: March 15, 1988

ES:Atlanta/Oolk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number Sample No.: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		380298 UF1 B-12 SS3, 8.5' 2-9-88 1540 2-17-88 3-10-88
Compound	Detection Limit mg/kg	ANALYTICAL RESULTS
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl	ether 0.66	ND
Purene	0.66	ND

Phenanthrene	u . 66	שא	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl e	ther 0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phtha		ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl et	her 0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	ນ . 66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	
· ·			

Priority Pollutant Analysis Page 3 of 5 Base Neutrals - SW 8270

Matrix: Soil (continued)

 Date Received:
 February 10, 1988
 P.O. No.:

 Date Reported:
 March 15, 1988
 Job No.:
 AT077

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

 Lab Number:
 880298

 Sample No.:
 UF1 B-12 SS3, 8.5'

 Date Sampled:
 2-9-88

 Time Sampled:
 1540

 Date Extracted:
 2-17-88

 Date Analyzed:
 3-10-88

Compound	Detection Limits	Analytical Results	
	mg/kg	m g /kg	
Acetophenone	+	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	1.3	ND	
l-Chloronaphthalene	*	ND	
Dibenzofuran	0.66	ND	
p-Dimethylaminoazobenzene	*	ND	
7,12-Dimethylbenz(a)anthr	acene*	ND	
a-,a-Dimethylphenethylami	ne*	ND	
Diphenylamine	*	ND	
1,2-Diphenylhydrazine	*	ND	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	~~*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	0.66	ND	
l-Naphthylamine	*	ND	
2-Naphthylamine	~~*	ND	
2-Nitroaniline	3.3	ND	
3-Nitroaniline	3 .3	ND	
4-Nitroaniline	3.3	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	ND .	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzen	e*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: February 10, 1988

Date Reported: March 15, 1988

P.O. No.:

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

Sample No.:

880298 UF1 2-12 SS3, 8.51

2-9-88

Date Sampled: Time Sampled:

1540

Date Extracted:

2-17-88

Date Analyzed:

3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	*	ND
Gamma-BHC	*	ND
Beta-BHC	0. 4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	 ★	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Katone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: February 10, 1988

Date Reported: March 15, 1988

P.O. No.:

ATTN: Mr. Jim Duncan

Job No. : AT077

FOR ES: Atlanta / Volk Field ANGB

Lab Number:

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880298

UF1 B-12 SS3, 8.51

Sample No. 2-9-88 Date Sampled: Time Sampled: 1540 Date Extracted: 2-17-88

3-10-38 Date Analyzed:

· •	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

Analyst

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Reported: March 15, 1988

Date Received: February 10, 1988

Address: 57 Executive Park S.E., Suite 590

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Atlanta, Georgia 30329

Lab Number:

880299

Sample No.:

UF1 B-13 SS1, 1.5'

Date Sampled: Time Sampled:

2-9-88 1600

Date Extracted: Date Analyzed:

2-17-88 3-11-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)et	her 0.66	ND
N-Nitrosodi-n-propyl ami		ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)metha	ne 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadien	e 0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND .
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: February 10, 1988 Date Reported: March 15, 1988

P.O. No.: Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880299 Lab Number:

UF1 B-13 SS1, 1.5 Sample No .:

2-9-88 Date Sampled: 1600 Time Sampled: Date Extracted: 2-17-88 3-11-88 Date Analyzed:

Detection ANALYTICAL RESULTS Compound Limit mg/kg mg/kg Phenanthrene Anthracene 0.66 ND 0.66 ND Dibutyl phthalate 0.66
Fluoranthene 0.66 ND ND 4-Chlorophenyl phenyl ether 0.66 ND ND 0.66 Pyrene Butyl Benzyl phthalate 0.66 ND ND Bis(2-ethylhexyl) phthalate 0.66 ND Chrysene 4-Bromophenyl phenyl ether 0.66 ND Benzo(a)anthracene 0.66 ND 0.66 ND Di-n-octylphthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene Di-n-octylphthalate 0.66 ND 0.66 ND ND Benzidine 6.0 3,3'-Dichlorobenzidine 1.3 ND Benzo(a)pyrene 0.66 ND Indeno(1,2,3-cd)pyrene 0.66
Dibenzo(a,h)anthracene 0.66
Benzo(ghi)perylene 0.66
Benzul Alcahol 1.3 ND ND ND ND Benzyl Alcohol 1.3

Priority Pollutant Analysis Page 3 of 5 Base Neutrals - SW 8270

Matrix: Soil (continued)

Date Received: February 10, 1988 P.O. No.:
Date Reported: March 15, 1988 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:52 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880299

Sample No.: 0F1 B-13 SS1, 1.5'

 Date Sampled:
 2-9-88

 Time Sampled:
 1600

 Date Extracted:
 2-17-88

 Date Analyzed:
 3-11-88

Compound Detection Analytical Results Limits mg/kg mg/kg Acetophenone ND --* ND Aniline 4-Aminobiphenyl 4-Chloroaniline --* ND 1.3 ND 4-Chloroaniiine 1-Chloronaphthalene --* ND Dibenzofuran 0.66 ND p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphenylamine
1,2-Diphenylhydrazine ND ND Ethyl methanesulfonate ND 3-Methylcholanthrene ND Methyl methanesulfonate ND 3-Methylcholanthrene 2-Methylnaphthalene --* ND 0.66 ND 1-Naphthylamine __* ND --* 2-Naphthylamine ND 2-Nitroaniline
3-Nitroaniline
4-Nitroaniline 3.3 ND 3.3 ND 3.3 ND N-Nitroso-di-n-butylamine --* ND N-Nitrosopi**peridine** ND ND Pentachlorobenzene Pentachloronitrobenzene ND --+ Phenacetin ND 2-Picoline ND Pronamide ND 1,2,4,5-Tetrachlorobenzene ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: February 10, 1988
Date Reported: March 15, 1988 Job No. : AT077 FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 Lab Number: 880299 Sample No. UF1 B-13 SS1, 1.5' Pate Sampled: 2-9-88 Time Sampled: 1600 Date Extracted: 2-17-88 Date Analyzed: 3-11-88 Compound Detection ANALYTICAL RESULTS
Limits mg/kg mg/kg Alpha-BHC --*
Gamma-BHC _-*
Beta-BHC 0.4 ND 0.4 0.2 0.3 ND ND Heptachlor 0.2
Delta-BHC 0.3
Aldrin 0.2
Heptachlor epoxide 0.2
Endosulfan I --*
Dieldrin 0.3
4,4'-DDE 0.6
Endrin --* ND ND ND ND ND ND ND Endrin --* ND Endrin
Endosulfan II --*
4,4'-DDD 0.3
4,4'-DDT 0.5
Endosulfan Sulfate 0.6
Endrin aldehyde --* ND ND ND ND ND Endrin Ketone --* ND Endrin Retune
Chlordane
Methoxychlor
Toxaphene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242 4.0 ND

--*

4.0 4.0

4.0 4.0

4.0

4.0

4.0

4.0

Aroclor-1248 Aroclor-1254 Aroclor-1260

ND

ND ND

ND ND

ND

ND

ND

ND

^{*} EPA has not yet determined detection limits for these compounds.

Date Received:

February 10, 1988 Date Reported: March 15, 1988

P.O. No. Job No. : ATU77

ES: Atlanta/Volk Field ANGB Address 57 Executive Park S.E., Suite 590

ATTN: Mr. Jim Duncan

Atlanta, Georgia 30329

Lab Number:

880299

Sample No.: Date Sampled:

UF1 B-13 SS1, 1.5'

Time Sampled:

2-9-88 1600

Date Extracted:

2-17-88

Date Analyzed

3-11-88

-	etection Limits	ANALYTICAL RESULTS
m	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chlora-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3 3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol		ND
2,4,5-Trichlorophenol	0.66	ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: February 11, 1988
Date Reported: March 25, 1988

25, 1988 Job No.: AT077

FOR: ES: Atlanta

ES: Atlanta/Volk ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:	8 8 0375
Sample No.:	UF1 B-13 SS2, 3.5'
Date Sampled:	2-10-88
Time Sampled:	1000
Date Extracted:	2-21-88
Date Analyzed:	3-15-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1 2 Dichlarahanaan	0.66	ND
1,3-Dichlorobenzene 1,4-Dichlorobenzene	0.66	ND
	0.66	ND
Hexachloroethane		-
Bis(2-chloroethyl)ether	0.6 6	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)et		ND
N-Nitrosodi-n-propyl ami		ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)metha	ne 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadien	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
	0.66	ND
N-Nitrosodiphenylamine		ND
Hexachlorobenzene	0.66	NU

page 2 of 5

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: February 11, 1988 P.O. No.:
Date Reported: March 25, 1988 Job No.: 9T077

FOR: ES:Atlanta/Volk ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880375
Sample No.: UF1 B-13 SS2, 3.5'

 Date Sampled:
 2-10-88

 Time Sampled:
 1000

 Date Extracted:
 2-21-88

 Date Analyzed:
 3-15-88

5000 micry200		• • • • • • • • • • • • • • • • • • • •	
Compound D	etection Limit	ANALYTICAL RESULTS	
	mg/kg	mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl eth	er 0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthale	te 0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ethe	r 0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthelate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	MD	
Indeno(1,2,3-cd)pyrene	0.66	MD	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis Base Neutrals - SW 8270

Page 3 of 5

Matrix: Soil (continued)

Date Received: February 11, 1988 P.O. No.:

Date Reported: March 25, 1988 Job No.: AT877

For: ES:Atlanta/Volk ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880375

Sample No.: UF1 B-13 SS2, 3.5'

DateSampled:2-10-88TimeSampled:1000DateExtracted:2-21-88DateAnalyzed:3-15-88

Compound Detection Analytical Results Limits mg/kg mg/kg ______ Acetophenone ND Aniline ND 4-Aminobiphenyl 4-Chloroaniline ND 1.3 ND 1-Chloronaphthalene --* ND 0.66 Dibenzofuran ND p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND Diphonylamine ND ND 1,2-Diphenylhydrazine Ethyl methanesulfonate ND ND 3-Methylcholanthrene Methyl methanesulfonate ND 3-Methylcholanthrene --* ND 2-Methylnaphthalene 0.66 ND 1-Naphthylamine --* ND --* ND 2-Naphthylamine 3.3 2-Nitroaniline ND 3.3 ND 3-Nitroaniline ND 4-Nitroaniline 3.3 ND N-Nitroso-di-n-butylamine N-Nitrosopiperidine ND Pentachlorobenzene ND Pentachloronitrobenzene ND Phenacetin ND 2-Picoline ND ND Pronamide ND 1,2,4,5-Tetrachlorobenzene

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

page 4 of 5

Date Received: February 11, 1988 P.O. No.:
Date Reported: March 25, 1988 Job No.: AT077

FOR: ES:Atlanta/Uolk ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880375

Sample No.: UF1 B-13 SS2, 3.5'

 Date Sampled:
 2-10-88

 Time Sampled:
 1000

 Date Extracted:
 2-21-88

 Date Analyzed:
 3-15-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
Alpha-BHC	*	ND
Gamma-BHC		ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0 . 6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	+	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Date Received: February 11, 1988 P.O. No.:

Date Reported: March 25, 1988

Job No. : AT077

FOR:

ES: Atlanta/Volk ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880375

UF1 B-13 SS2, 3.5' Sample No.:

Date Sampled: Time Sampled:

2-10-88 1000

Date Extracted:

2-21-88

Date Analyzed:

3-15-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND .
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachloropheno	_	ND
2,4,5-Trichlorophenol	0.66	ND

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

page 1 of 5

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: February 11, 1988 Date Reported:

P.O. No.: Job No. : AT077

March 25, 1988

ES: Atlanta/Volk ANGB

ATTN: Mr. Jim Duncan

57 Executive Park S.E., Suite 590 Address:

Atlanta, Georgia 30329

880376 Lab Number:

Sample No.: UF1 B-13 SS3, 8.5'

2-10-88 Date Sampled: Time Sampled: 1015 Date Extracted: 2-21-88 3-15-88 Date Analyzed:

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1,3-Dichlorabenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)et	her 0.66	ND
N-Nitrosodi-n-propyl ami:	ne 0.66	ND
Hexachlorobutadiene	0.66	ND .
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methan		ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadien		ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthelate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
	0.66	ND
N-Nitrosodiphenylamine		ND
Hexachlorobenzene	0.66	NU

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: February 11, 1988 P.O. No.:
Date Reported: March 25, 1988 Job No.: AT077

FOR: ES:Atlanta/Volk ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:	990376
Sample No.:	UF1 B-13 SS3, 8.5'
Date Sampled:	2-10-88
Time Sampled:	1015
Date Extracted:	2-21-88
Date Analyzed:	3-15-88

Compound Detection ANALYTICAL RESULTS

	Limit ng/kg	mg/kg	
Dhanash bana	n ee	NB	
Phenanthrene	0.66	ND ND	
Anthracene	0.66		
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether		ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
		ND	
Benzyl Alcohol	1.3	עח	

Priority Pollutant Analysis Base Neutrals - SW 8270

Page 3 of 5

Matrix: Soil (continued)

Date Received: February 11, 1988 P.O. No.:
Date Reported: March 25, 1988 P.O. No.: AT077

For: ES:Atlanta/Volk ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880376
Sample No.: UF1 B-13 SS3, 8.5'
Date Sampled: 2-10-88
Time Sampled: 1015
Date Extracted: 2-21-88
Date Analyzed: 3-15-88

pare meryada.		2-13-00	
Compound	Detection Limits	Analytical Results	
	mg/kg	mg/kg	
Acetophenone	*	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	1.3	ND	
1-Chloronaphthalene	*	ND	
Dibenzofuran	0.66	ND	
p-Dimethylaminoazobenzene	*	ND	
7,12-Dimethylbenz(a)anthr		ND	
a-,a-Dimethylphenethylami		ND	
Diphenylamine	*	ND	
1,2-Diphenylhydrazine	*	ND	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	0.66	ND	
1-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroeniline	3.3	ND	
3-Nitroeniline	3.3	ND	
4-Nitroeniline	3.3	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronemide	*	ND	
1,2,4,5-Tetrachlorobenzen	e*	ND	
· ·			

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: February 11, 1988 Date Reported: March 25, 1988

ES: Atlanta/Volk ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880376

UF1 8-13 SS3, 8.5' Sample No.:

Date Sampled: 2-10-88 Time Sampled: 1015 2-21-88

Date Extracted: 3-15-88 Date Analyzed:

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
Alphe-BHC	*	ND
Gamma-BHC	*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

page 5 of 5

Date Received: February 11, 1988

P.O. No ::

Date Reported: March 25, 1988

Job No. : AT077

-

FOR: ES:Atlanta/Volk ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880376

Sample No.: UF1 B-13 SS3, 8.5'

 Date Sampled:
 2-10-88

 Time Sampled:
 1015

 Date Extracted:
 2-21-88

 Date Analyzed:
 3-15-88

Compound D	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Pheno 1	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol		ND
2,4,5-Trichlorophenol	0.66	ND

Laura Kuck

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Matrix: Soi

Date Received: February 11, 1988 Date Reported: March 25, 1988

P.O. No.:

Job No. : AT077

FOR:

ES: Atlanta/Volk ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880377

Sample No.: UF1 8-14 SS1, 1.0'

 Date
 Sampled:
 2-10-88

 Time
 Sampled:
 1100

 Date
 Extracted:
 2-21-88

 Date
 Analyzed:
 3-15-88

Compound 1	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
4 2 Nichlandhana	n ee	
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND ·
Hexachlorosthane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)et		ND
N-Nitrosodi-n-propyl ami		ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methan	ne 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

page 2 of 5

Date Reported:

Date Received: February 11, 1988

March 25, 1988

P.O. No.:

Job No. : AT077

FOR: ES: Atlanta/Volk ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

880377

Sample No.:

Indeno(1,2,3-cd)pyrene

Dibenzo(a,h)anthracene Benzo(ghi)perylene

Benzyl Alcohol

UF1 B-14 SS1, 1.0'

Date Sampled: Time Sampled: 2-10-88 1100

Date Extracted:

2-21-88

ND

ND

ND

ND

Date Analyzed:

3-15-88

Compound D	etection Limit	ANALYTICAL RESULTS	
	mg/kg	mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl eth	er 0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthale		ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ethe	r 0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	

0.66

0.66

0.66

1.3

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Page 3 of 5

Date Received: February 11, 1988 P.O. No.:
Date Reported: March 25, 1988 Job No.: AT077

For: ES:Atlanta/Volk ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880377
Sample No.: UF1 B-14 SS1, 1.0'
Date Sampled: 2-10-88

Time Sampled: 1100
Date Extracted: 2-21-88
Date Analyzed: 3-15-88

Compound Detection Analytical Results Limits mg/kg mg/kg Acetophenone ND Aniline --* ND Aniline
4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene --* ND 1.3 ND --* ND 0.66 Dibenzofuran ND p-Dimethylaminoazobenzene ND ND 2,12-Dimethylbenz(a)anthracene --* a-,a-Dimethylphenethylamine --* ND ND Diphenulamine ND 1,2-Diphenylhydrazine Ethyl methanesulfonate ND ND 3-Methylcholanthrene Methyl methanesulfonate ND 3-Methylcholanthrene 2-Methylnaphthalene 1-Naphthylamine --* ND 0.66 ND --* ND --* ND 2-Naphthylamine 2-Nitroaniline 3.3 ND ND 3-Nitroaniline 3.3 3.3 ND 4-Nitroaniline N-Nitroso-di-n-butylamine ND N-Nitrosopiperidine ND Pentachlorobenzene ND Pentachloronitrobenzene ND ND Phenacetin ND 2-Picaline --+ ND Pronemide 1,2,4,5-Tetrachlorobenzene ND

^{*}EPA has not yet determined detection limits for these compounds.

Prierity Pollutent Analysis Pesticides and PCBs - SU 8270 Matrix: Soil

Atlanta, Georgia 30329

ANALYTICAL RESULTS compound Detection Limite mg/kg mg/kg Alpha-MC --+ ND Jamma- MC leta-BIC ND ND Heptechier 0 2 ND De Ita- MC ND Aldrin ND teptachier epoxide ND Endosulfan I 0.3 ND Dieldein ND 4.4'-DDE 0.6 ND Endrin ND Endesulfan II 0.3 ND 4.4'-000 ND 4.4'-DOT 0.5 Endesuifen Suifate 0.6 ND Endrin eldehyde ND Endrin Ketone ND ND Chlordane ND **Methox** uch lor 4.0 ND foxeshene ND 4 0 Proclor-1016 4.0 ND Proclor-1221 ND 4.0 Proclor-1232 ND Proclor-1242 ND Proclor-1248 ND Procior-1254 4.0 4 0 ND Aroclor-1260

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: February 11, 1988 Date Reported: March 25, 1988

P.O. No.:

Job No. : AT077

FOR: ES:Atlanta/Volk ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880377

Sample No.: UF1 B-14 SS1, 1.0'

Date Sampled: 2-10-88 Time Sampled: 1100 Date Extracted: 2-21-88 Date Analyzed: 3-15-88

Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg 2-Chlorophenol 2-Nitrophenol 0.66 0.66 ND 0.66 ND Phenol 2,4-Dimethylphenol
2,4-Dichlorophenol 0.66 ND 0.66 ND 2,4,6-Trichlorophenol 0.66 ND 4-Chloro-3-methylphenol 1.3 MD 2,4-Dinitrophenol
2,6-Dichlorophenol 3.3 ND ND 2-Methyl-4,6-Dinitrophenol 3.3 ND Pentachlorophenol 3.3 ND 4-Nitrophenol 3.3 ND Benzoic Acid 3.3 ND 2-Methylphenol 0.66 ND 3- & 4-Methylphenol ND 0.66 ND 2,3,4,6-Tetrachlorophenol --* 2,4,5-Trichlorophenol 0.66 ND

Analust

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless NOTE: other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE
QUALITY CONTROL RESULTS SUMMARY
SAMPLE NO(S): 88030531 & 88020377

Surrogate recoveries for sample 88030531 included two from the acid fraction that were outside of CLP QC limits. Matrix spike analyses were performed on this sample. Surrogate recoveries for the matrix spike and MSD showed a similar pattern. According to CLP protocol, this is sufficient to show a matrix effect.

Acid surrogate spike recoveries for sample 88020377 were below CLP QC limits. There was insufficient sample remaining to re-extract the sample.

Emiliosistas ir times Priority Priintens imperate Bose montrole : in 1824 matric impi

FOR ES Actions of the Ames

Address 37 Executive Fort \$ 6 . Auto 194

ationio, deergio 33329

Lab Number		ee 1 3 ² 6
Sample No		(着) 後: 5 年 (1883 - 5 年
Date Sampled		\$ 5 \$ \$ # ** **
Time Sampled		
Date Extracted		
		2 4 \$ \$ ± 40
Date Amalysed		5

Compound	201001100	arms, 17 t Cinc. WESSEL 79
	Cimito	
	ud. pd	
1,3-Oschierobensene	3 44	••
1,4-Dichierobensene	9 04	•
Hexachloreethene	9 44	46
Bis (2-chloroethyl)ether	3 44	
1.2-Dichlorobensone	0 64	
•		
N-Nitrosedimethylemine	2 3	

Bis(2-chloroisopropyl)ether # 64 4444444444444444444 N-Nitrosedi-n-propyi emine 9 64 Hexachlorobutediene 3 44 1,2,4-Trichlorobensene 3 64 Nitrobensene 9 66 1 44 Isophorone Nephthelene . 44 Bis (2-chloroethexy)methere 0 64 2-Chieronaphtheiene . 44 9.64 Hexachlorocyclopentadiene 8 64 Acenaphthylene Acenephthene 0 66 Dimethyl phthelete 9 66 2,6-Dinitrotoluene . 64 9.66 Fluorene 2.4-Dinitrotoluene 9 66 Diethyl phthelate 0 64 9 66 N-Nitrosodiphenulemine Hexachlorobenzene 9 66

Priority Poliutent Amelyote Seco Moutrole - SU 8220 Motrie Both (continued)

page 2 of 5

late Reserved February 1:		P 0 Me Jeb Me AT077
108 ES Attenta/Vella And Iddress 57 Executive Park (Attenta, Secreta	E . Sui	atte mr Jan Duncan to 598
.ab Number lample Ne late Sampled 'ime Sampled late Extracted late Whelywed		000370 UF1 8-14 882, 3 5 2-10-00 1230 2-21-00 3-15-00
Jempeund Dete Li me	ietien inst j/bg	MMALYTICAL RESULTS
Monanthrene	9 66	KO
Prity acono Dibuty i ghinelete	0 66	MO MD
Flueronthene	3 44	NO.
4-Chierephonyi phonyi ether		ND
Purene	0 66	NO
Butyl Boneyl phtheiste	0 64	MÖ
Dis(2-ethylhoxyl) phthelate	0 66	™
Shryeene	9 66	MD
4-Bromophonyi phonyi ether		NO
Bonzo (a) onthrocono	0 66	H Q
Di-n-octylphthelete	0 66	MO MO
Bonzo(b)fluorenthono Bonzo(k)fluorenthono	0.66	~
Bong ad a no	6.0	NO
3.3'-Dichlerobeneidine	1.3	ND
Bense (a) pyrene	0.64	ND
Indene(1,2,3-ed)pyrene	0.64	₩Ô
Dibenso(a, h) anthrecene	0.66	ND
Bense(ghi)perylans	0 66	NO.
Bensyl Alcohel	1 - 3	HØ

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Page 3 of 5

(continued)

Date Received: February 11, 1988 P.O. No.:

Date Reported: Job No. : AT077 March 25, 1988

ES: Atlanta/Volk ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Fark S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880378

Sample No.: VF1 B-14 SS2, 3.5'

Date Sampled: 2-10-88 Time Sampled: 1230 Date Extracted: 2-21-88 Date Analyzed: 3-15-88

Compound Detection Analytical Results Limits mg/kg mg/kg Acetophenone --* ND --* Aniline ND Aniline
4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene ND 1.3 ND --* ND Dibenzofuran 0.66 ND --* p-Dimethylaminoazobenzene ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND --* Diphenylamine ND 1,2-Diphenylhydrauine ND Ethyl methanesulfonate ND 3-Methylcholanthrene ND Methyl methanesulfonate ND 3-Methylcholanthrene ND 2-Methylnaphthalene 0.66 ND ND 1-Naphthylamine 2-Naphthylamine ND 3.3 ND 2-Nitroaniline 3.3 ND 3-Nitroaniline 3.3 4-Nitroaniline ND N-Nitroso-di-n-butylamine ND --# ND N-Nitrosopiperidine ND Pentachlorobenzene --* ND Pentachloronitrobenzene ND Phenacetin 2-Picoline ND ND Pronamide 1,2,4,5-Tetrachlorobenzene ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

page 4 of 5

te Received: February 11, 1988 P.O. No.: te Reported: March 25, 1988 Job No.:	AT077
--	-------

R: ES:Atlanta/Uolk ANGB ATTN:Mr. Jim Duncan

dress: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

b Number:	8803 78
mple No.:	UF1 B-14 SS2, 3.5'
te Sampled:	2-10-88
me Sampled:	1230
te Extracted:	2-21-88
te Analyzed:	3-15-88

mpound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
phe-BHC	*	ND
mma-BHC	★	ND
ta-BHC	0.4	ND
ptachlor	0.2	ND
ilta-BHC	0.3	ND
drin	0.2	ND
ptachlor epoxide	0.2	ND
dosulfan I	*	ND
eldrin	0.3	ND
4'-DDE	0.6	ND
drin	*	ND
dosulfen II	*	ND
4'-DDD	0.3	ND
4'-DDT	0.5	ND
dosulfan Sulfate	0.6	ND
drin aldehyde	*	ND
drin Ketone	*	ND
lordane	4.0	ND
thexychlor		ND
xaphene	4.0	ND
oclor-1016	4.0	ND
oclor-1221	4.0	ND
oclor-1232	4.0	ND
oclor-1242	4.0	ND
oclor-1248	4.0	ND
oclor-1254	4.0	ND
oclor-1260	4.0	ND

EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SU 8278 Matrix Soil

Date Received: February 11, 1986 P 3 No.
Date Reported: March 25, 1988 Feb No. #787*

FOR: ES: Atlanta/Volk ANGS ATTN my Jim Summer

Address:57 Executive Park S E , Suite 598

Atlanta, Georgia 30329

Lab Number:

Sample No.:

Date Sampled:

Time Sampled:

Date Extracted:

Date Analyzed:

\$66576

U\$1 \$-14 \$62. 3 \$

2-16-66

1236

3-18-66

Compound	Detection Limits	MARLYTICAL BESULTS
	mg/hg	ad.pd
2-Chloropheno!	0.66	**
2-Nitrophenol	0 64	× €
Phenal	0.44	wė –
2,4-Dimethylphenol	0 66	NO.
2,4-Dichlorophenol	0 . 64	**
2,4,6-Trichlorophenol	0.66	•
4-Chloro-3-methylphenol	1.3	MQ.
2,4-Dinitrophenol	3.3	140
2,6-Dichlorophenol		MQ
2-Methyl-4,6-Dinitropher	ol 3.3	M O
Pentachlorophenol	3.3	₩ ©
4-Nitrophenol	3.3	₩
Benzoic Acid	3.3	₩
2-Methylphenel	1.66	₩
3- & 4-Methylphenel	9.66	₩6
2,3,4,6-Tetrachlorophene	1	₩
2,4,5-Trichlorophenel	0.66	₩ 0

Same Kurk

... Add Devator...

*EPA has not yet determined detection limits for these compounds

NOTE: Samples are discarded 38 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

jeyo .

ENGINEESING SCIENCE Priority Politicant Amalyois Base Moutrois - No 8278 Matrix Soil

Poblicary it, 1900 7 3 *** e fore ; ved Maran 25, 1986 e Reported 25 Attenta Vett ANGS 17 Executive Park & E . Suite 198 1.... Atlanta, Joorgia 33329 000371 1 Number WF: B-: 4 \$63 6 5 sele Ne 2-13-00 to Sampled no Sampled :330 2-21-00 to Entrested 3-14-00 te Analysed Detection AMALYTICAL BETERTITE ngound Limite mg/bg 1-Dighierobensene 4-Diehlerebensene 2 44 -achieracthone 6 64 =(2-ehlereethyliether 9 66 2-Dichlerobonsono 9 66 Mitropodimothylemine s(2-chloroloopropyl)other 8 66 . .. Witresedi-n-prepui emine rechiere buted sens 4 44 2.4-Trichlerebensene . 44 trobonsono 6 64 poherene 2 44 phihelene 3 64 b(2-chieroethery)methere 9 64 0.64 Chieronephtheiene 9 66 rachierocyclepomiadione prepht hylene 9 64 9 66 eneght here nothul phtholote 0.64 B-Dinitroteluene 4.44 161670 0 66 4-Dinitrotoluene 8 66 sthyl phthelete 1 66 ND Witrosodiphonylemine 8 66 NO

NED

0 64

rachierobenzene

Priority Pollutant Analysis Sacs Heutrals - SU 8270 Matrix Soil (continued)

ate Received February 11, 1988 P.O. No. ate Reported March 25, 1988 Job No. AT077

OR: ES Atlanta/Velk ANGS ATTN: Mr. Jim Duncan

ddress 57 Executive Park S E , Suite 590

Atlanta, Georgia 30329

ab Number	600371
iample No	UF1 8-14 SS3, 8.5'
Late Sampled	2-10-88
ine Sampled	1330
late Estracted	2-21-88
late Analysed:	3-14-08

'om pound	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenenthrene	0.66	ND
Inthracene	0.66	ND
):butyl phthelete	0.66	ND
lluoranthene	0.66	ND
I-Chlorophenyl phenyl eti	her 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phtheld	ate 0.66	· ND
Thrysene	0.66	ND
I-Bramaphenyl phenyl ethe	or 0.66	ND
lenzo(a)anthracene	0.66	ND
)1-n-octylphthelate	0.66	ND
lenzo(b)fluorenthene	8.66	ND
Benso(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
lenso(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	מא

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Page 3 of 5

P.O. No.: :a Received: February 11, 1988 :e Reported: March 25, 1988 Job No. : AT077

ES: Atlanta/Volk ANGB ATTN: Mr. Jim Duncan

iress:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

	D-44:	Omelinki sal Basulka	
te Analyzed:		3-14-88	
te Extracted:		2-21-88	
ne Sampled:		1330	
te Sampled:		2-10-88	
nple No.:		VF1 B-14 SS3, 8.5'	
b Number:		880371	

mpound	Detection	Analytical	Results
	Limits		
	mg/kg	mg/kg	
stophenone	*	ND	
iline	*	DM	
Aminobiphenyl	*	ND	
Chloroaniline	1.3	ND	
Chloronaphthalene	*	ND	
benzofuran	0.66	П	
Dimethylaminoazobenzene	*	ND	
12-Dimethylbenz(a)anthr	acene*	ND	
,a-Dimethylphenethylamin	ne*	ND	
phenylamine	*	ND	
2-Diphenylhydrazine	*	ND	
hyl methanesulfonate	*	ND	
Methylcholanthrene	*	ND	
thyl methanesulfonate	*	ND	
Methylcholanthrene	*	ND	
Methylnaphthalene	0.66	ND	
Naphthylamine	*	ND	
Naphthylamine	*	MD	
Nitroaniline	3.3	ND	
Nitroaniline	3.3	ND	
Nitroeniline	3.3	ND	
Nitroso-di-n-butylamine	*	ND	
Nitrosopiperidine	*	ND	
ntachlorobenzene	~-*	ND	
ntachloronitrobenzene	☆	MD	
enacetin	*	ND	
Picoline	*	ND	
onemide	~-*	ND	
2,4,5-Tetrachlorobenzen	•*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

late Received: February 11, 1988 late Reported: March 25, 1988 P.O. No.:

Job No. : AT077

ES:Atlanta/Uolk ANGB ATTN: Mr. Jim Duncan

Iddress: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880371 .ab Number:

UF1 B-14 SS3, 8.5' jample No.:

)ate Sampled: 2-10-88 ime Sampled: 1330)ate Extracted: 2-21-88)ate Analyzed: 3-14-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
lpha-BHC	*	ND
Jamma-BHC	*	ND
3eta-BHC	0.4	an
ieptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
deptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde		DN
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Proclor-1016	4.0	ND
Proclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Proclor-1242	4.0	ND
Proclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Proclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Politicant analysis and graduates and the extra terms of the extra and the ex

Howe : . . .

	9 () (100 1 (100	P C May Hall Mark 19
FOR: ES Asiente/Vela Address 57 Enecutive Par Atlante, Georgia		**** *** *** *************************
Lab Number Sample No Date Sampled: Time Sampled: Date Extracted Date Avalyzed		00337; 17: 0::0 883 0 1 2::3:00 2:21:00 3:10-00
Compound	Dotoction Limits mg/kg	merte
2-Chlorophenol	0 66	•••••••••••••••••••••••••••••••••••••••
2-Nitrophenol Phenol	9 66 9 66	~⊙ ~⊙
2,4-Dimethylphenol	0 66	•
2,4-Dichlorophenol	0 66	₩0
2,4,6-Trichlorophenol	0 66	MØ
4-Chlora-3-methylphenel	1 3	₩ D
2,4-Dinitrophenol	3.3	•
2,6-Dichlorophenol		NO
2-Methyl-4,6-Dinitrophen		10
Pentachlorophenol	3 . 3 3 . 3	MD MD
4-Nitrophenol Benzoic Acid	3.3 3.3	ND
2-Methylphenol	0.66	10
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachloropheno		ND
2,4,5-Trichlorophenol	0.66	ND

Laura Kuck

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

fortunesting actions. Fortunery Fortunes, Monoconomic States and Park Monoconomic Sta

\$450 was ; 11 1900 Date Reserved Date Segarted MONTH IN THE fos ES ALLEMAN CHIEF ANGE 17 Engalis Part & E actiones desegts 34920 ## E 3 #E Lab Minber wes but the ... tample No Date Sempled \$. \$ B . 00 . 74 1 Time Sempled Date Estreeted 1:11:00 3 . 1 T . 44 Dete Amelyand Seineiren AMERICAN COL MENSON TO 44.44 1.3-Osenierebeneene 3 66 merachieraethane 3 66 Bis(2-chieraethyl)ether 3 66 1,2-Dichierabensene N-Mitreadi N-Nitrosedimethylemine 2 5 Bis(2-enloreseaprepyi)other & 66 N-Nitrosedi-n-gregyi emine 4 66 . 64 Horachiorobutadiene 3 44 1.2.4-Trichlorobensone 0 44 Nitrobenzene 44 Isaphorone Naphthelene . .. Bis(2-chloroethery)methene 8 66 0 64 2-Chioronaphtheiene . 64 Hexachierocyclopentadiene 8 64 Acenephthylene 0 66 Acenephthene Dimethyl phthelete 0.64 2.6-Dinitrotoluene 9 66 0 66 Fluorene

0 66

9 66

0 66

2,4-Dinitrotoluene

Diethyl phthelete

Hexachlorobenzene

N-Nitrosodiphenylemine

page 2 of 5

Priority Pollutant Analysis Sees Moutrals - SW 8228 Metrie Seil (centinued)

Date Received February Date Reported March 25:		P O Me Jeb Ne - AT077
FOR ES Attanta/Velb 6 Address: 97 Executive Park Attanta, Seergia	1463 1 5 E , 5 4110	ATTH: Mr Jam Duncan
Cab Number Sample Ne Date Sampled Time Sampled Date Extracted Date Amalysed		000372 UF1 B-15 SS1, 0 5: 2-10-00 1350 2-21-00 3-15-00
Compound	testion Limit mg/hg	apmLyTical RESULTS mg/kg
Phononthrone Anthrocome Dibutyl phthelete Fluorenthone 4-Chierophenyl phenyl ethe Pyrone Butyl Bensyl phthelete Bis(2-ethylhesyl) phthelete Chrysone 4-Bromophenyl phenyl ethet Bense(a)enthrocome Di-n-ectylphthelete Bense(b) fluorenthone Bense(k) fluorenthone Bense(k) fluorenthone Bense(k) fluorenthone Bense(k) fluorenthone	0 64 0 66 0 66 0 66 0 66 0 66 0 66	MD MD MD MD MD MD MD MD MD MD MD MD
Benze(a)pyrene Indeno(1,2,3-cd)pyrene Dibenze(a,h)anthracene Benzo(ghi)perylene Benzyl Alcohel	0.66 0.66 0.66 1.3	ND ND ND ND ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Page 3 of 5

continued)

Date Received: February 11, 1988 P.O. No.:
Date Reported: March 25, 1988 Job No.: AT077

For: ES:Atlanta/Volk ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 980372

Sample No.: UF1 B-15 SS1, 0.5'

 Date Sampled:
 2-10-88

 Time Sampled:
 1350

 Date Extracted:
 2-21-88

 Date Analyzed:
 3-15-88

-

Detection Analytical Results Compound Limits mq/kq mg/kg Acetophenone ND --* Aniline ND 4-Aminobiphenyl 4-Chloroeniline ND 1.3 ND 1-Chloronaphthalene --* ND Dibenzofuran 0.66 ND p-Dimethulaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND a-,a-Dimethylphenethylamine --* ND ND Diphenulamine 1,2-Diphenylhydrazine ND Ethyl methanesulfonate ND 3-Methylcholanthrene ND Methyl methanesulfonate ND 3-Methylcholanthrene --* ND 2-Methylnaphthalene 0.66 ND 1-Naphthylamine ND 2-Naphthylamine --* ND 2-Nitroaniline 3.3 ND 3-Nitroaniline 3.3 ND 3.3 4-Nitroaniline ND N-Nitroso-di-n-butylamine ND N-Nitrosopiperidine ND Pentachlorobenzene ND Pentachloronitrobenzene ND Phenacetin ND ND 2-Picaline Pronamida ND 1,2,4,5-Tetrachlorobenzene ND --*

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

FOR: ES:Atlanta/Volk ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880372
Sample No.: UF1 B-15 SS1, 0.5'
Date Sampled: 2-10-88
Time Sampled: 1350

Time Sampled: 1350
Date Extracted: 2-21-88
Date Analyzed: 3-15-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
Alpha-BHC	*	ND
Gamma-BHC	★	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	NĎ
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	. 0.6	ND
Endrin		ND
Endosulfan II		ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	 	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Araclar-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Poliutant Analysis Acid Extractables -- SU 8278 Matrix Soil

5440 T at 1

Date Received: February 11, 1988 P 0 100 Date Reported: Merch 25, 1966 ----ES: Atlanta/Volk ANGS Address:57 Executive Park S & , Suite 590 Atlanta, Georgia 30329 Lab Number: 000372 Sample No.: UF1 8-15 881, 0 5 Date Sampled 2-10-06 Time Sampled: 1350 Date Extracted: 2-21-00 Date Analyzed: Compound AMALYTICAL RESULTS Detection Limite mg/kg mg/kg 2-Chlorophenol 0.66 NO 2-Nitrophenol 0.66 ND Phenol. 0 66 ND 0 66 2,4-Dimethulphenol ND 0.66 2,4-Dichlorophenol 0.68 2,4,6-Trichlorophenol 0.68 4-Chloro-3-methylphenol 1.3 2,4-Dichlorophenol ND ND ND 2,4-Dinitrophenol 3.3 ND 2,6-Dichlorophenol --+ ND 2-Methyl-4,6-Dinitrophenol 3.3 ND Pentachlorophenol 3.3 ND 4-Nitrophenol 3.3 ND Benzoic Acid 3.3 ND

Lama Kuck

2-Methylphenol

3- & 4-Methylphenol

2,4,5-Trichlorophenol

2,3,4,6-Tetrachlorophenol --*

0.66

0.66

0.66

Laboratory Supervisor

ND

ND

ND

ND

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

page 1 of 5

DIGINEERING SCIDICE Priority Poliutant Analysis Base Moutrais - SU 8270 Matria Soil

Date Received: February 11, 1988 PO No Date Reported: March 25, 1988 AT077 Job No

ES Atlanta/Velk ANGS ATTN: Mr Jim Duncan

Address: 57 Executive Park S E , Suite 598

Atlanta, Georgia 30329

Leb Number:	000373
Sample No.	UF1 8-15 882, 3 5°
Date Sampled:	2-10-06
Time Sampled:	1500
Date Extracted:	2-21-00
Date Amalyzed:	3-15-00

Compound	Detection Limits mg/kg	AMALYTICAL RESULTS mg/kg
1,3-Dichlorobensame	0.66	ND
1,4-Dichlorobensene	0.66	ND
Hexachloroethane	0.66	NO
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobensene	0.66	ND
N-Nitrosodimethylemine	2.5	ND
Bis(2-chloroisopropyl)et	her 0.66	ND
N-Nitrosodi-n-propyl emi	ne 0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobensene	0.66	ND
Nitrobensene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methe	ne 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadien	. 0.66	ND
Acenaphthylene	0.66	ND
Acenapht hene	0.66	ND
Dimethyl phthelate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND
44~	J . J J	• • • • • • • • • • • • • • • • • • •

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: February 11, 1988 P.O. No.: Date Reported: March 25, 1988

Job No. : AT077

ES: Atlanta/Volk ANGB

Benzyl Alcohol

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880373

Sample No .: UF1 B-15 SS2, 3.5'

1.3

Date Sampled: 2-10-88 Time Sampled: 1500 Date Extracted: 2-21-88 3-15-88 Date Analyzed:

Compound Detection ANALYTICAL RESULTS Limit mg/kg mg/kg ______ Phenanthrene 0.66 0.66 Anthracene ND Dibutyl phthalate Fluoranthene ND 0.66 0.66 ND 4-Chlorophenyl phenyl ether 0.66 ND ND 0.66 Pyrene Butyl Benzyl phthalate ND 0.66 Bis(2-ethylhexyl) phthalate 0.66 ND ND 0.66 Chrysene 4-Bromophenyl phenyl ether 0.66 ND ND Benzo(a)anthracene 0.66 ND 0.66 Di-n-octulphthalate ND Benzo(b)fluoranthene 0.66 0.66 ND Benzo(k)fluoranthene Benzidine 6.0 ND 3,3'-Dichlorobenzidine 1.3 ND Benzo(a)pyrene 0.66 ND Indeno(1,2,3-cd)pyrene 0.66 ND 0.66 Dibenzo(a,h)anthracene ND Benzo(ghi)perylene 0.66 ND ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Page 3 of 5

Matrix: Soil (continued)

For: ES:Atlanta/Volk ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880373

Sample No.: UF1 B-15 SS2, 3.5'

Date Sampled: 2-10-88
Time Sampled: 1500
Date Extracted: 2-21-88
Date Analyzed: 3-15-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone		ND
Aniline	*	ND
4-Aminobiphenyl	*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	#	ND
Dibenzofuran	0.6 6	ND
p-Dimethylaminoazobenzene	*	ND
7,12-Dimethylbenz(a)anthr	acene*	ND
a-,a-Dimethylphenethylamin		ND
Diphenylamine	#	ND
1,2-Diphenylhydrazine	*	ND
Ethyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND ND
Methyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
2-Methylnaphthalene	0 . 6 5	ND
1-Naphthylamine	*	ND
2-Naphthylamine	*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroeniline	3.3	ND
N-Nitroso-di-n-batylamine	*	ND
N-Nitrosopiperidine	*	ND
Pentachlorobenzene	*	ND
Pentachloronitrobenzene	*	ND
Phenacetin	*	ND
2-Picoline	*	ND
Pronemide	*	ND
1,2,4,5-Tetrachlorobenzene	·*	ND

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutent Analysis Posticides and PCBs - SU 8278 Matrix Soil

Date Received: February 11, 1988 P 0 Me Date Reported: March 25, 1988 P 0 Me ATS77

FOR: ES: Atlanta/Volk ANGS ATTH Mr Jim Duncan

Address: 57 Executive Park S E , Suite 590

Atlanta, Georgia 30329

Lab Number:	800373
Sample No.:	UF1 8-15 882, 3 5
Date Sampled:	2-10-00
Time Sampled:	1500
Date Extracted:	2-21-00
Date Analyzed:	3-15-00

Compound	Detection Limits mg/kg	AMALYTICAL RESULTS mg/kg	
Alpha-BHC		ND	
Gamma-BHC		ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	№	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND D	
Heptachlor epoxide	0.2	ND	
Endosulfan I	•	NO	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	+	ND	
Endosulfan II	*	ND	
4,4'-DDD	0.3	ΝĎ	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	9 . 6	ND	
Endrin aldehyde	*	ND	
Endrin Ketone	*	ND	
Chlordane	4.0	ND	
Methoxychlor		ND	
Toxaphene	4.0	ND	
Aroclor-1016	4.0	ND	
Aroclor-1221	4.0	ND	
Aroclor-1232	4.0	ND	
Aroclor-1242	4.0	ND	
Aroclor-1248	4.0	ND	
Aroclor-1254	4.0	ND	
Aroclor-1260	4.0	ND	

 $[\]star$ EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Reid Extractables -- SU 8270 Matrix Soil

page 5 of 5

February 11, 1966 Date Received:

P 0. No.:

Date Reported: March 25, 1988

Job No. AT077

FOR: ES: Atlanta/Uolk ANGS

Jim Duncan ATTN: ME

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880373

UF1 9-15 982, 3.5"

Sample No .: Date Sampled: 2-10-66

1500

Time Sampled: 2-21-00 Date Extracted: Date Analyzed:

3-15-88

Compound	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0 . 66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol		ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless NOTE: other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: February 11, 1988 Date Reported: March 25, 1988

FOR:

ES:Atlanta/Volk ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329

Lab Number:

880374

Sample No.:

UF1 B-15 SS3, 8.5'

Date Sampled: Time Sampled:

2-10-88 1510

Date Extracted:

2-21-88

Date Analyzed:

3-15-88

Campound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachlorosthans	0.66	ND
Bis(2-chlorosthyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis (2-chloroisopropyl) et		ND
N-Nitrosodi-n-propyl ami		ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
		ND
Bis(2-chloroethoxy)metha	0.66	ND
2-Chloronaphthalene		-
Hexachlorocyclopentadien		ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Disthyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

page 2 of 5

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: February 11, 1988 Date Reported: March 25, 1988

P.Q. No.:

Job No. : AT077

Date Analyzed:

FOR: ES: Atlanta/Volk ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880374

UF1 B-15 SS3, 8.5 Sample No .:

Date Sampled: 2-10-88 Time Sampled: 1510 Date Extracted: 2-21-88

Compound D	etection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	066	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl eth	er 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthala	te 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ethe	r 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthelate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(é, h) anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

3-15-88

Priority Pollutant Analysis Base Neutrals - SW 8270

Page 3 of 5

Matrix: Soil (continued)

Date Received: February 11, 1988 P.O. No.:
Date Reported: March 25, 1988 Job No.: AT077

For: ES:Atlanta/Volk ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880374

Sample No.: UF1 B-15 SS3, 8.5'

Date Sampled: 2-10-88
Time Sampled: 1510
Date Extracted: 2-21-88
Date Analyzed: 3-15-88

Compound	Detection Limits	Analytical Results
	mg/kg	mg/kg
Acetophenone	*	ND
Aniline	*	ND
4-Aminobiphenyl	*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	+	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	*	ND
7,12-Dimethylbenz(a)anthra	cene*	ND
a-,a-Dimethylphenethylamin		ND
Diphenylamine	*	ND
1,2-Diphenylhydrazine	*	ND
Ethyl methanesulfonate	*	ND
3-Methylcholanthrene		ND
Methyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	#	ND
2-Naphthylamine	*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	*	ND
N-Nitrosopiperidine	*	ND
Pentachlorobenzene	*	ND
Pentachloronitrobenzene	*	ND
Phenacetin	*	ND
2-Picaline	*	ND
Pronamide	*	ND
1,2,4,5-Tetrachlorobenzene	*	ND

^{*}EPA has not yet determined detection limits for these compounds

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

FOR: ES:Atlanta/Uolk ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

Sample No.:

Date Sampled:

Time Sampled:

Date Extracted:

Date Analyzed:

Compound

Detection

880374

UF1 B-15 SS3, 8.5'

2-10-88

1510

2-21-88

3-15-88

	Limits	ningitone record
	mg/kg	mg/kg
Alpha-BHC	*	ND
Gamma-BHC	*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	. ND
Endrin	- · · *	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- 80 8278 Matris Soil

Date Received: February 11, 1988

P.O No

Date Reported:

March 25, 1988

Job No 9T077

ES: Atlanta/Uolk ANGB

Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880374

UF1 8-15 \$83, 6 5 Sample No .:

Date Sampled: 2-10-88 Time Sampled: 1510

Date Extracted: 2-21-00 Date Analyzed: 3-15-88

Detection Limits	ANALYTICAL RESULTS	
mg/kg	mg/kg	
0.66	ND	
	ND	
	ND	
	ND	
3.3	ND	
*	ND	
enal 3.3	ND	
3.3	ND	
3.3	ND	
3.3	ND	
0.66	ND	
	ND	
	ND	
0.66	ND	
	Limits mg/kg 0.66 0.66 0.66 0.66 1.3 3.3 3.3 3.3 3.3 0.66 0.66	Limits mg/kg mg/kg 0.66 ND

Lama Kuck

Analyst

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

5454

ENGINEERING SCIENCE Priority Politiant Analysis Base Neutrals - 38 3270 Matria Soil

January 27, 1988 Date Received P 0 40 March 3, 1988 Date Reported Job No HT077 ES Atlanta/Volk Field ANGB Jim Duncar 57 Executive Park S E . Suite 590 Address Atlanta, Georgia 30329 Lab Number 990187 Sample No. ₩F1 8-21 SS-1, 1) Date Sampled 1-26-48 Time Sampled 1210 Date Extracted 2-1-88 2-8-89 Date Analyzed Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg 1,3-Dichlorobenzene 0.66 ND 1,4-Dichlorobenzene 0 66 ND 0.66 Hexachloroethane ND Bis(2-chloroethyl)ether 0.66 ND 1,2-Dichlorobenzene 0.66 N-Nitrosodimethylamine 2.5 0.66 ND ND Bis(2-chloroisopropyl)ether 0 66 ND N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 ND 1.2.4-Trichlorobenzene 0.66 ND Nitrobenzene 0.66 ND Isophorone 0.66 ND 0.66 ND Naphthalene Bis(2-chloroethoxy)methane 0.66 ND 2-Chloronaphthalene 0.66 ND Hexachlorocyclopentadiene 0.66 ND Acenaphthylene 0.66 ND 0.66 ND Acenaphthene Dimethyl phthelate 2,6-Dinitrotoluene 0.66 ND 0.66 ND

ND

ND

ND

ND

ND

0.66

0.66

0.66

0.66

Fluorene

2,4-Dinitrotoluene
Diethyl phthalate

Hexachlorobenzene

N-Nitrosodiphenylamine

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

(continued)

P.O. No - AT077 Date Received: January 27, 1988 Date Reported: March 3, 1988

FOR ES: Atlanta/Volk Field ANGB ATTN: Mr Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

380187 Lab Number Sample No. UF1 B-21 35-1, 1 0' Date Sampled: 1-26-38 Time Sampled 1210 Date Extracted 2-1-88

Date Analyzed:

2-8-88

Compound De	etection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	0.66	ИD
Anthracene	0.66	ND
Dibutyl phthalate	ข. 66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ethe	er 0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalat	e 0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Page 3 of 5

(continued)

Date Received: January 27, 1988 Date Reported: March 3, 1988 P D No Job No. AT077

For: ES:Atlanta/Volk Field ANGB ATTN Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number 380137 Sample No.: UF1 B-21 SS-1, 1 1

Date Sampled: 1-26-98 Time Sampled 1210 Date Extracted: 2-1-88 Date Analyzed: 2-8-88

. Compound Detection Analytical Results Limits mg/kg mg/kg Acetophenone Aniline ND Aniline --* ND 4-Aminobiphenyl
4-Chloroaniline
1-Chloronaphthalene
Dibenzofuran ND 1.3 ND ND 0.66 ND p-Dimethylaminoazobenzene --* ND 7,12-Dimethylbenz(a)anthracene --* ND a-.a-Dimethylphenethylamine --* ND Diphenylamine
1,2-Diphenylhydrazine Diphenylamine ND ND Ethyl methanesulfonate 3-Methylcholanthrene --+ ND ND Methyl methanesulfonate ND 3-Methylcholanthrene 2-Methylnaphthalene ND 0.66 ND 1-Naphthylamine
2-Naphthylamine
2-Nitroaniline
3-Nitroaniline
4-Nitroaniline ---ND ND 3.3 ND 3.3 ND 4-Nitroaniline 3.3 ND N-Nitroso-di-n-butylamine --* ND N-Nitrosopiperidine ND Pentachlorobenzene --* ND Pentachloronitrobenzene ND Phenacetin ND 2-Picoline ND Pronamide ND 1,2,4,5-Tetrachlorobenzene ND

^{*}EPA has not yet determined detection limits for these compounds.

Date Received: January 27, 1988 P 0 No HT077

FOR: ES:Atlanta/Volk Field ANGB ATTN Mr Jim Duncan

Address: 57 Executive Park S E., Suite 590

Atlanta, Georgia 30329

 Lab Number:
 380187

 Sample No.:
 UF1 8-21 3S-1, 1 0'

 Date Sampled:
 1-26-88

 Time Sampled:
 1210

 Date Extracted:
 2-1-88

 Date Analyzed:
 2-8-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
Alpha-BHC		
Gamma-BHC	•	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	*	ND
Chlordane	4.0	ND
Methoxychlor	*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	DN
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4 0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4. ŭ	ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

page S of 5

Date Received: January 27, 1988 Date Reported: March 3, 1988

P. D. No.

Job No 9T027

Lab Number:

FOR ES: Atlanta/Volk Field ANGB

Jim Duncan ATTN: Mr

Address 57 Executive Park 5 E Suite 590

Atlanta, Georgia 30329

980187

Sample No.: UF1 B-21 SS-1, 1 0' Date Sampled

1-26-88 1210

Time Sampled: Date Extracted:

2-1-88

Date Analyzed:

2-8-88

	etection Limits	ANALYTICAL RESULTS
•	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenal	0 66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno:	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	*	ND
2,4,5-Trichlorophenol	0.66	ND

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE Sample(s) No.: 88010186-0199 Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 27, 1988 Date Reported: March 3, 1988

FOR: ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329

Lab Number:

880188

UF1 B-22 SS1, 0.5 Sample No.: Date Sampled:

1-26-88 1430

Time Sampled: Date Extracted: Date Analyzed:

2-1-88 2-16-88

race maryzed		2-10-00
Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
1,3-Dichlorobenzene	33	ND
1,4-Dichlorobenzene	33	ND
Hexachloroethane	33	ND
Bis(2-chloroethyl)ether	33	ND
1,2-Dichlorobenzene	33	ND
N-Nitrosodimethylamine	130	ND
Bis(2-chloroisopropyl)et		ND
N-Nitrosodi-n-propyl amii		ND
Hexachlorobutadiene	33	ND
1,2,4-Trichlorobenzene	33	ND
Nitrobenzene	33	ND
Isophorone	33	ND
Naphthalene	33	ND
Bis(2-chloroethoxy)methan		ND
2-Chloronaphthalene	33	ND
Hexachlorocyclopentadiene		ND
Acenaphthylene	33	ND
Acenaphthene	33	ND
Dimethyl phthalate	33	ND
2,6-Dinitrotoluene	33	ND
Fluorene	33	ND
2,4-Dinitrotoluene	33	ND
Diethyl phthalate	33	ND
N-Nitrosodiphenylamine	33	ND
Hexachlorobenzene	33	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: January 27, 1988

Date Reported: January 27, 1966

Date Reported: March 3, 1988

P.Q. No.

Job No. AT077

FOR:

Lab Number:

ES:Atlanta/Volk Field ANGB

ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880188

UF1 B-22 SS1, 0.5

 Sample No.
 UF1 B-23

 Date Sampled:
 1-26-88

 Time Sampled:
 1430

 Date Extracted:
 2-1-88

 Date Analyzed:
 2-16-88

	tection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
Phenanthrene	33	ND
Anthracene	33	ND
Dibutyl phthalate	33	ND
Fluoranthene	33	ND
4-Chlorophenyl phenyl ethe	r 33	ND
Pyrene	33	ND
Butyl Benzyl phthalate	33	ND
Bis(2-ethylhexyl) phthalat	e 33	ND
Chrysene	33	ND
4-Bromophenyl phenyl ether	33	. ND
Benzo(a)anthracene	3 3	ND
Di-n-octylphthalate	33	ND
Benzo(b)fluoranthene	33	ND
Benzo(k)fluoranthene	33	ND
Benzidine	300	ND
3,3'-Dichlorobenzidine	65	ND
Benzo(a)pyrene	3 3	ND
Indeno(1,2,3-cd)pyrene	33	ND
Dibenzo(a,h)anthracene	33	ND
Benzo(ghi)perylene	33	ND
Benzyl Alcohol	65	ND

Priority Pollutant Analysis Base Neutrals - SW 3270 Matrix: Soil (continued)

Page 3 of 5

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880188

Sample No.: UF1 B-22 SS1, 0.5'

 Date Sampled:
 1-26-88

 Time Sampled:
 1430

 Date Extracted:
 2-1-88

 Date Analyzed:
 2-16-88

Compound	Detection Limits	Analytical	Results
	mg/kg	m g ∕kg	
Acetophenone	*	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	65	ND	
1-Chloronaphthalene	*	ND	
Dibenzofuran	33	ND	
p-Dimethylaminoazobenzene	*	ND	
7,12-Dimethylbenz(a)anthra	icane*	ND	
a-,a-Dimethylphenethylamir		ND	
Diphenylamine	*	. ND	
1,2-Diphenylhydrazine	*	ND	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	33	ND	
1-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	160	ND	
3-Nitroaniline	160	ND	
4-Nitroanili ne	160	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	ND	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzene	•*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8278 Matrix: Soil

Date Received: January 27, 1988 P.O. No. Date Reported: March 3, 1988 Job No. : AT077

FOR: ES:Atlanta/Oolk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880198

Sample No.: UF1 B-22 SS1, 0.5'

 Date Sampled:
 1-26-88

 Time Sampled:
 1430

 Date Extracted:
 2-1-88

 Date Analyzed:
 2-16-88

Compound Detection ANALYTICAL RESULTS Limits mg/kg mg/kg Alpha-BHC --*
Gamma-BHC _-* ND 20 ND Beta-BHC ND 10 Heptachlor ND Delta-BHC 15 ND 10 Aldrin ND Heptachlor epoxide Endosulfan I 10 ND --* ND Dieldrin 4,4'-DDE Dieldrin 15 ND 30 ND --* Endrin ND Endosulfan II ~-* ND 4,4'-DDD 15 ND 4,4'-DDT 25 ND Endosulfan Sulfate Endrin aldehyde 30 ND ~-* ND Endrin Ketone --* ND 200 Chlordane ND Methoxychlor --* ND 200 Toxaphene ND Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 200 ND 200 200 200 ND ND ND Aroclor-1248 200 ND Aroclor-1254 200 ND Aroclor-1260 200 ND

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Date Received: Date Reported: March 3, 1988

January 27, 1988

P 0. No

ATURE Job No

ES: Atlanta/Volk Field ANGB

ATTN Mr Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number:

980188

Sample No.:

UF1 B-22 551, 0 5

Date Sampled: Time Sampled: 1-26-88

ND

Date Extracted: Date Analyzed:

2,4,5-Trichlorophenol

1430 2-1-88

2-15-88

	 	 	_
Cam	 ~~		

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	33	ND
2-Nitrophenol	33	ND
Phenol	33	ND
2,4-Dimethylphenol	33	ND
2,4-Dichlorophenol	33	ND
2,4,6-Trichlorophenol	33	ND
4-Chloro-3-methylphenol	65	ND
2,4-Dinitrophenol	160	ND
2,6-Dichlorophenol	~-*	ND
2-Methyl-4,6-Dinitropheno	160	ND
Pentachlorophenol	160	ND
4-Nitrophenol	160	ND
Benzoic Acid	160	ND
2-Methylphenol	33	ND
3- & 4-Methylphenol	33	ND
2,3,4,6-Tetrachloropheno	l*	ND

33

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE MARRATIVE Sample(s) No.: 88010186-3199 Work Order Number 467

This group of samples was received at the Serkeley Laboratory on 1-27-as. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

page 1 of 5

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil

Date Received: January 29, 1988

Date Reported: March 4, 1988

P.O. No.:

Job No. : ATU77

ATTN: Mr. Jim Duncan

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Sqite 590

Atlanta, Georgia 30329

Lab Number: 880214

UF1, B26, SS1, 0' Sample No.:

Date Sampled: 1-28-88 Time Sampled: 1320 Date Extracted: 2-2-88 Date Analyzed: 3-1-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	m g /kg
1,3-Dichlorabenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)et		ND
N-Nitrosodi-n-propyl ami		ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)metha	ine 0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadier	ne 0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Distryl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: January 29, 1988

P Q No

Date Reported: March 4, 1988

Job No 41077

ES:Atlanta/Oolk Field ANGB

ATTN: Mr Jim Duncan

Address 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880214 Lab Number:

UF1, B26, SS1, 0' Sample No .:

1-28-88 Date Sampled: 1320 Time Sampled: 2-2-88 Date Extracted: 3-1-88 Date Analyzed:

Detection ANALYTICAL RESULTS Compound Limit mg/kg mg/kg ------

	,	, ,
Phenanthrene	0 . 66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Page 3 or 5

_	·-	,	-	No No	AT077

For ES:Atlanta/Uolk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number	880214
Sample No.	UF1, B26 , SS1, 0°
Date Sampled:	1-28-88
Time Sampled:	1320
Date Extracted:	2-2-88
Date Analyzed:	3-1-88

Compound	Detection Limits	Analytical Results
	mg/kg	mg/kg
Acetophenone	*	ND
Aniline	*	ND
4-Aminobiphenyl	*	ND
4-Chloroaniline	1 3	ND
1-Chloronaphthalene	*	ND
Dibenzofuran	0 66	ND
p-Dimethylaminoazobenzene	*	ND
7,12-Dimethylbenz(a)anthrac	cens*	ND
a-,a-Dimethylphenethylamin	e*	ND
Diphenylamine	*	ND
1,2-Diphenylhydrazine	*	ND
Ethyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
Methyl methanesulfonate	*	ND
3-Methylcholanthrene	*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	*	ND
2-Naphthylamine	*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	*	ND
N-Nitrosopiperidine	*	ND
Pentachlorobenzene	*	ND
Pentachloronitrobenzene	*	ND
Phenacetin	*	ND
2-Picoline	*	ND
Pronamide	*	ND
1,2,4,5-Tetrachlorobenzene	*	ND

⁺EPA has not yet determined detection limits for these compounds

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

Date Received: January 29, 1988

P O No

Date Reported: March 4, 1988

Job No : AT077

ES:Atlanta/Volk Field ANGB

ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880214

Lab Number: Sample No.:

UF1, B26, SS1, 0'

Date Sampled: Time Sampled: 1-28-88 1320

Date Extracted: Date Analyzed:

2-2-88 3-1-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
Alpha-BHC	*	ND
Gamma-BHC	*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	~-*	ND
Endosulfan II	*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	*	ND
Endrin Ketone	~-*	ND
Chlordane	4.0	ND
Methoxychlor	~-*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

^{*} EPA has not yet determined detection limits for these compounds.

page 5 of 5

Priority Pollutant Analysis Acid Extractables -- SW 8270

Matrix: Soil

Date Received: January 29, 1988 Date Reported: March 4, 1988

P.O. No Job No AT077

ATTN: Mr. Jim Duncan

FOR: ES:Atlanta/Volk Field ANGB Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

380214 Lab Number:

Sample No.: UF1, B26, SS1, 0'

1-28-88 Date Sampled: 1320 Time Sampled: Date Extracted: 2-2-88 3-1-88 Date Analyzed:

Compound	Detection Limits	ANALYTICAL RESULTS	
	mg/kg	mg/kg	
2-Chlorophenol	0.66	ND	
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	
2,4-Dimethylphenol	0.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenol	3.3	ND	
2,6-Dichlorophenol	*	ND	
2-Methyl-4,6-Dinitropheno	1 3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3.3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND	
2,3,4,6-Tetrachlorophenol	*	ND	
2,4,5-Trichlorophenol	0.66	ND	

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil

Date Received: February 10, 1988

Date Reported: March 15, 1988

Hexachlorobenzene

P.O. No.: Job No. AT077

ATTN: Mr. Jim Duncan

FOR: ES:Atlanta/Volk Field ANGB Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880300

Sample No.: UF1 B-28 SS1, 1.5'

0.66

Date Sampled: 2-9-88 Time Sampled: 1600 2-17-88 Date Extracted: Date Analyzed: 3-11-88 Date undiated

ANALYTICAL RESULTS Compound Detection Limits mg/kg mg/kg _____ 1,3-Dichlorobenzene 0.66 1,4-Dichlorobenzene 0.66 Hexachloroethane 0.66 ND ND Hexachloroethane ND Bis(2-chloroethyl)ether 0.66
1,2-Dichlorobenzene 0.66
N-Nitrosodimethylamine 2.5 ND ND ND Bis(2-chlorossopropyl)ether 0.66 ND N-Nitrosodi-n-propyl amine 0.66 ND Hexachlorobutadiene 0.66 ND 0.66 1,2,4-Trichlorobenzene ND Nitrobenzene 0.66 ND Isophorone 0.66 ND ND Naphthalene 0.66 Bis(2-chloroethoxy)methane 0.66 ND 0.66 ND 2-Chloronaphthalene Hexachlorocyclopentadiene 0.66 ND 0.66 ND Acenaphthylene ND 0.66 Acenaphthene 0.66 ND Dimethyl phthalate ND 2,6-Dinitrotoluene 0.66 Fluorene 0.66 ND 0.66 2,4-Dinitrotoluene ND Diethyl phthalate 0.66 ND N-Nitrosodiphenylamine ND 0.66

ND

Priority Pollutant Analysis Base Neutrals - SW 8270 Matrix: Soil (continued)

Date Received: February 10, 1988 Date Reported: March 15, 1988

P 0 No : Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: 880300

OF1 B-28 SS1, 1.5' Sample No.:

2-9-88 Date Sampled: 1600 Time Sampled: Date Extracted: 2-17-88 Date Analyzed: 3-11-88

Date Hidly20a.		3 1. 00
Compound I	Detection Limit	ANALYTICAL RESULTS
	mg/kg	mg/kg
	0 00	NB
Phenanthrene	0.66	ND
Anthracene	0 66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl et		ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthala	ate 0.66	ND
Chrysene	0.66	ND .
4-Bromophenyl phenyl ethe	er 0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	D.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis Base Neutrals - SW 8270

Matrix: Soil (continued)

For: ES:Atlanta/Volk Field ANGB ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

 Lab Number:
 880300

 Sample No.:
 UF1 B-28 SS1, 1.5'

 Date Sampled:
 2-9-88

 Time Sampled:
 1600

 Date Extracted:
 2-17-88

 Date Analyzed:
 3-11-88

Compound	Detection Limits	Analytical Results	
	mg/kg	mg/kg	
Acetophenone	*	ND	
Aniline	*	ND	
4-Aminobiphenyl	*	ND	
4-Chloroaniline	1.3	ND	
1-Chloronaphthalene	*	ND	
Dibenzofuran	0.66	ND	
p-Dimethylaminoazobenzene	*	ND	
2,12-Dimethylbenz(a)anthra	acene*	ND	
a-,a-Dimethylphenethylami		ND	
Diphenylamine	*	ND	
1,2-Diphenylhydrazine	*	ND	
Ethyl methanesulfonate	*	ND	
3-Methylcholanthrene	*	ND	
Methyl methanesulfonate	`*	ND	
3-Methylcholanthrene	*	ND	
2-Methylnaphthalene	0.66	ND	
1-Naphthylamine	*	ND	
2-Naphthylamine	*	ND	
2-Nitroaniline	3.3	ND	
3-Nitroaniline	3.3	ND	
4-Nitroanilina	3.3	ND	
N-Nitroso-di-n-butylamine	*	ND	
N-Nitrosopiperidine	*	ND	
Pentachlorobenzene	*	ND	
Pentachloronitrobenzene	*	NĎ	
Phenacetin	*	ND	
2-Picoline	*	ND	
Pronamide	*	ND	
1,2,4,5-Tetrachlorobenzen	e*	ND	

^{*}EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Pesticides and PCBs - SW 8270 Matrix: Soil

FOR: ES:Atlanta/Volk Field ANGB ATTN:Mr. Jim Duncan

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

Lab Number: Sample No.: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		880300 UF1 B-28 SS1, 1 5 2-9-88 1600 2-17-88 3-11-38	
Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg	
Alpha-BHC		ND	
Gamma-BHC	*	ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	*	ND	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	*	ND	
Endosulfan II	*	ND	
4,4'-DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	*	ND	
Endrin Ketone	*	ND	

ND

ND

ND

ND ND

ND

ND

ND

ND

ND

4.0

--*

4.0

4.0

4.0

4.0

4.0

4.0

4.0

4.0

Chlordane

Toxaphene Aroclor-1016

Methoxychlor

Araclor-1221

Aroclor-1232

Aroclor-1242

Aroclor-1248

Aroclor-1254

Aroclor-1260

^{*} EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- SW 8270 Matrix: Soil

Pate Received: February 10, 1988 P.O No.:

Date Reported:

March 15, 1988

Job No. : AT077

ES:Atlanta/Oolk Field ANGB

ATTN: Mr. Jim Duncan

Address:57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

880300

UF1 B-28 SS1, 1.5'

Date Sampled: Time Sampled:

Lab Number:

Sample No.:

2-9-88 1600

Date Extracted:

2-17-88

Date Analyzed:

3-11-88

-	etection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	*	ND
2-Methyl-4,6-Dinitropheno	1 3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol		ND
2,4,5-Trichlorophenal	0.66	ND

Muy Analyst

Laboratory Supervisor

*EPA has not yet determined detection limits for these compounds.

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned NOTE: to client or disposed of at client expense.

PRIORITY POLLUTANT ANALYSIS PESTICIDES & PCB'S EPA 625

MATRIX: WATER

Client: Attn: ES Atlanta

Address:

Ernie Daly 57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329

Compound	Detection	Limits
Aldrin	2	ug/L
Alpha-BHC	2*	ug/L
Beta-BHC	4	ug/L
Delta-BHC	3 2 *	ug/L
Gamma-BHC (Lindane)		ug/L
Chlordane	40	ug/L
4,4'-DDD	3	ug/L
4,4'-DDE	6	ug/L
4,4'-DDT	5 3	ug/L
Dieldrin		ug/L
Endosulfan I	8*	ug/L
Endosulfan II	8*	ug/L
Endosulfan sulfate	6	ug/L
Endrin	8=	ug/L
Endrin aldehyde	3*	ug/L
Heptachlor	2	ug/L
Heptachlor epoxide	2	ug/L
Toxaphene	40	ug/L
PCB-1016	40	ug/L
PCB-1221	40	ug/L
PCB-1232	40	ug/L
PCB-1242	40	ug/L
PCB-1248	40	ug/L
PCB-1254	40	ug/L
PCB-1260	40	ug/L

 $^{^{*}}$ Denotes instrument detection limit. EPA has not yet determined method detection limits for these compounds.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - EPA 625

page 1 of 4

ND

Matrix: Water

Date Received: March 9, 1988 P.O. No.: Job No. : AT077 April 19, 1988 Date Reported: FOR: ES: Atlanta/Volk ANGB Address: 57 Executive Park S.E., Suite 590 Atlanta, Georgia 30329 Mr. Jim Duncan ATTN: 880567 880568 Lab Number: UF, ET-2, GW1, ES Sample No.: UF, ET-1, GW1, ES 3-8-88 Date Sampled: 3-8-88 1115 1345 Time Sampled: 3-14-88 3-12-88 Date Extracted: 4-12-88 Date Analyzed: 4-12-88 Compound Detection ANALYTICAL RESULTS Limits ug/L ug/L 1,3-Dichlorobenzene 2 1,4-Dichlorobenzene 2 ND ND 1,4-Dichlorobenzene ND ND 2 ND Hexachloroethane ND Bis(2-chloroethyl)ether
1,2-Dichlorobenzene 6 ND ND 2 ND ND N-Nitrosodimethylamine 25 ND ND ND Bis(2-chloroisopropyl)ether 6 ND N-Nitrosodi-n-propyl amine 25 ND ND Hexachlorobutadiens ND ND 1 1,2,4-Trichlorobenzene ND ND 2 ND Nitrobenzene ND ND 2 ND Isophorone Naphthalene ND ND 5 ND ND Bis(2-chloroethoxy)methane 2 2-Chloronaphthalene ND ND Hexachlorocyclopentadiene 25 ND ND ND ND Acenaphthylene ND ND Acenaphthene Dimethyl phthalate 2 ND ND 2,6-Dinitrotoluene 2 ND ND 2 ND ND Fluorene 2,4-Dinitrotoluene 2 ND ND 2 ND ND Diethyl phthalate ND ND N-Nitrosodiphenylamine 2

Hexachlorobenzene

Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water (continued)

page 2 of 4

			page 2 01
Date Received: Date Reported:	March 9, 1988 April 19, 1988		: AT077
FOR: Address:	ES:Atlanta/Volk ANGB 57 Executive Park S.E Atlanta, Georgia 3	., Suite 590 10329	
ATTN:	Mr. Jim Duncan		
Lab Number: Sample Number: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		880567 VF, ET-1, GW1, ES 3-8-88 1115 3-12-88 4-12-88	880568 UF, ET-2, GW1, ES 3-8-88 1345 3-14-88 4-12-88
Compound	Detection	ANALYTICAL R	RESULTS
	Limit ug/L	ug/L	ug/L
Phenanthrene	5	ND	ND
Anthracene	2	ND	ND
Dibutyl phthalat	e 3	ND	ND
Fluoranthene	2	ND	ND
4-Chlorophenyl p		ND	ND
Pyrene	2	ND	ND
Butyl Benzyl pht		ND	ND
Bis(2-ethylhexyl) phthalate 3	. ND	ND
Chrysene	3	NO	ND
4-Bromophenyl ph		ND	NO
Benzo(a)anthrace		ND	ND ND
Di-n-octylphthal		ND	NO
Benzo(b)fluorant		ND NC	ND
Benzo(k)fluorant		ND	ND
Benzidine	60	ND ND	ND
3,3'-Dichloroben	zidine 40 3	ND	ND
Benzo(a)pyrene		ND	ND
Indeno(1,2,3-cd)	F J · - · · -	ND	ND
Dibenzo(a,h)anth Benzo(ghi)peryle		ND	ND

Priority Pollutant Analysis Pesticides and PCBs - EPA 625 Matrix: Water

page 3 of 4

P.O. No.: Date Received: March 9, 1988 Date Reported: April 19, 1988 Job No. : AT077 ES: Atlanta/Volk ANGB 57 Executive Park S.E., Suite 590 Address: Atlanta, Georgia 30329 Mr. Jim Duncan ATTN: 880567 880568 UF, ET-1, GW1, ES UF, ET-2, GW1, ES Lab Number: Sample No.: Date Sampled: 3~8-88 3-8-88 1115 Time Sampled: 1345 3-12-88 3-14-88 Date Extracted: 4-12-88 4-12-88 Date Analyzad: Detection ANALYTICAL RESULTS Compound Limits ug/L ug/L Alpha-BHC ND ND Gamma-BHC ND ND Beta-BHC ND 4 ND ND Heptachlor ND Delta-BHC 3 ND ND 2 ND ND Aldrin Heptachlor epoxide ND ND Endosulfan I --* ND ND 3 ND Dieldrin ND ND 4,4'-DDE ND Endrin --* ND ND Endosulfan II --* ND ND 4,4'-000 3 ND ND 4,4'-DDT 5 ND ND

* Detection limits have not yet been determined for these compounds

6

--*

40

40

40

40

40

40

40

40

40

Endosulfan Sulfate

Endrin aldehyde

Chlordane

Toxaphene

PCB-1016

PCB-1221

PCB-1232

PCB-1242

PCB-1248

PCB-1254

PCB-1260

ND

ND

ND

ND

ND

ND

ND

ND

ND

NO

ND

Priority Pollutent Analysis Acid Extractables -- EPA 625

Matrix: Water

page 4 61 4

Date Received: M Date Reported: A	erch 9, 1988 pril 19. 1988	-	o.:
	S:Atlente/Volk ANG		
	7 Executive Park S tlanta, Georgia		
ATTN: M	r. Jim Duncan		
Lab Number:		880547	800568
Sample No.:		UF, ET-1, GW1, ES	UF, ET-2, GW1, ES
Date Sampled:		3-8-86	3 - 6 - 60
Time Sampled:		1115	1349
Date Extracted:		3-12-00	3-14-66
Date Analyzed:		4-12-00	4-12-00
Compound	Detection	ANALYTICAL	RESULTS
	Limits		
	ug/L	ug/L	∪ņ /L
2-Chiorophenol	3	NO	NO
2-Nitrophenol	4	NO	NO
Phenol	2	NO	NO .
2,4-Dimethylphenol	3	NO.	NO
2,4-Dichlorophenol	3	NO	NO
2,4,6-Trichlorophe	nol 3	MO	₩ O
4-Chloro-3-methylp		NO	NO
2,4-Dinitrophenol	40	NO	₩0

Sawa Kurk

2-Methyl-4,6-Dinitrophenol 20

Pentechlorophenol 4-Nitrophenol

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or dispused of at client expense.

CASE MARRATIVE Work Order Mumper 534 Sample Mo. 68030568

Matrix effects caused the relative percent difference for 4-chloro-)-methylphenol to be higher than EPA recommended guidelines. Analysis of spiked blanks showed the laboratory to be in control.

ENGINEERING SCIENCE Priority Pollutent Analysis Base Neutrals - EPA 625 Matrix: Water

page 1 of 4

Date Received: Date Reported:	March 9, 1988 April 19, 1988	P.O. No.: Job No. : AT077
FOR:	ES:Atlanta/Volk ANGE	3
Address:	57 Executive Park S.	E., Suite 590
	Atlanta, Georgia	30329
ATTN:	Mr. Jim Duncen	
Lab Number:		880569
Sample No.:		UF, ET-3, GW1, ES
Date Sampled:		3-8-88
Time Sampled:		1500
Date Extracted:		3-12-88
Date Analyzed:		4-13-88
Compound	Detection	ANALYTICAL RESULTS
	Limits	
	ug/L	ug/L
1,3-Dichlorobenze	ene 2	ND
1,4-Dichlorobenz		ND
Hexachloroethane	2	ND
Bis(2-chloroethy		ND
1,2-Dichlorobenz		ND
N-Nitrosodimethy		ND
Bis(2-chloroisop		ND
N-Nitrosodi-n-pr		ND
Hexachlorobutadi	- 	ND
1,2,4-Trichlorob		ND
Nitrobenzene	2	ND
Isophorone	2	ND
Naphthalene	2	51
Bis(2-chloroetho	xy)methane 5	ND
2-Chloronaphthal		ND
Hexachlorocyclop	entadiene 25	ND
Acenephthylene	4	ND
Acenaphthene	2	ND
Dimethyl phthala		ND
2,6-Dinitrotolue	ne 2	ND
Fluorene		ND
2,4-Dinitrotolue		ND
Diethyl phthalat		ND
N-Nitrosodipheny		ND
	_	ND

ND

2

Hexach lorobenzene

Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water (continued)

page 2 of 4

Date Received: Date Reported:	March 9, 1988 April 19, 1988	P.O. No.:
FOR: Address:	ES:Atlanta/Volk ANGB 57 Executive Park S.I Atlanta, Georgia	
ATTN:	Mr. Jim Duncan	70727
Lab Number:		880569
Sample No.:		VF, ET-3, GW1, ES
Date Sampled:		3-8-88
Time Sampled:		1500
Date Extracted:		3-12-88
Date Analyzed:		4-13-88
Compound	Detection Limit	ANALYTICAL RESULTS
	ug/L	ug/L
Phenanthrene	5	ND
Anthracene	2	ND
Dibutyl phthalate		NO
Fluoranthene	2	ND
4-Chlorophenyl ph	enyl ether 4	ND
Pyrene	2	ND
Butyl Benzyl phth	alate 3	ND
Bis(2-ethylhexyl)		28
Chrysene	· 3	ND
4-Bromophenyl phe	myl ether 2	ND
Benzo (a) anthracen	•	ND
Di-n-octylphthala	ite 3	ND
Benzo(b) fluoranth		ND
Benzo(k)fluoranth	iene 3	ND
Benzidine	60	ND
3,3'-Dichlorobenz	idine 20	ND
Benzo(a)pyrene	3	ND
Indeno(1,2,3-cd)p		ND
Dibanaca blankha	7	NO

3

Dibenzo(a,h)anthracene

Benzo(ghi)perylene

ND

Priority Pollutant Analysis Pesticides and PCBs - EPA 625 Matrix: Water

page 3 of 4

Date Received: Date Reported:	March 9, 1988 April 19, 1988	P.O. No.;
Data Kabontad:	HP/11 17, 1700	300 NO. 7 H1077
FOR:	ES: Atlanta/Volk ANGB	
Address:	57 Executive Park S.E	Suite 590
		0329
ATTN:	Mr. Jim Duncan	
Lab Number:		880569
Sample No.:		UF, ET-3, GW1, ES
Date Sampled:		3-8-88
Time Sampled:		1500
Date Extracted:		3-12-88
Date Analyzed:		4-13-88
Compound	Detection	ANALYTICAL RESULTS
	Limits	
	ug/L	ug/L
Alpha-BHC		ND
Gamma-BHC	4	ND ND
Beta-BHC	<u> </u>	ND
Heptachlor		ND
Delta-BHC	2 3	ND
Aldrin	3	ND
Heptachlor epoxic		ND
Endosulfan I		ND
Dieldrin	3	NO
4,4'-DDE	6	ND
Endrin	*	ND
Endosulfan II	~~#	ND
4,4'-DDD	3	ND
4,4'-DDT	5	ND
Endosulfan Sulfat		ND
Endrin aldehyde	 → ♥	ND
Chlordane	40	NO.
Toxaphene	40	NO
PCB-1016	40	ND
PCB-1221	40	NO
PCB-1232	40	ND
PCB-1242	40	ND
PC8-1248	40	ND
PCB-1254	40	ND
000 10/0	4.6	ND.

40

PCB-1260

^{*} EPA has not yet published detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- EPA 625 Matrix: Water

page 4 of 4

Date Received: March 9, 1988 P.O. No.:

Date Reported: April 19, 1988 Job No.: AT077

FOR: ES:Atlanta/Volk ANGB

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880569

Sample No.: UF, ET-3, GW1, ES

Date Sampled: 3-8-88
Time Sampled: 1500
Date Extracted: 3-12-88
Date Analyzed: 4-13-88

Compound	Detection Limits	ANALYTICAL RESULTS	
	ug/L	ug/L	
2-Chlorophenol	3	ND	
2-Nitrophenol	4	NO	
Phenol	2	27	
2,4-Dimethylphenol	3	NO	
2,4-Dichlorophenol	3	NO	
2,4,6-Trichlorophenol	3	NO	
4-Chloro-3-methylphenol	3	NO	
2,4-Dinitrophenol	40	NO	
2-Methyl-4,6-Dinitrophen	ol 20	ND	
Pentachlorophenol	4	76	
4-Nitrophenol	2	ND	

Analust

Laboratory Supervisor

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Lawa Luck

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water

page 1 of 4

Date Received:	March 10, 1988	P.O. No.:
Date Reported:	April 21, 1988	Job No. : AT077

FOR:

ES:Atlanta/Volk ANGB

Address:

57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329 Mr. Jim Duncan

ATTN:

Lab Number:	88030572	88030573
Sample No.:	VF, ET-5, GW1, ES	VF, ET-4, GW1, ES
Date Sampled:	3-9-88	3-9-88
Time Sampled:	1130	1030
Date Extracted:	3-14-88	3-14-88
Date Analyzed:	4-13-88	4-13-88

Compound	Detection Limits	ANALYTICAL RESULTS	
	ug/L	ug/L	ug/L
1,3-Dichlorobenzene	2	ND	ND
1,4-Dichlorobenzene	2	ND	ND
Hexachloroethane	2	ND	ND
Bis(2-chloroethyl)ether	6	ND	ND
1,2-Dichlorobenzene	2	ND	MD
N-Witrosodimethylamine	25	ND	ND
Bis(2-chloroisopropyl)et	her 6	ND	ND
N-Nitrosodi-n-propyl amin		ND	ND
Hexachlorobutadiene	1	ND	ND
1,2,4-Trichlorobenzene	2	ND	ND
Nitrobenzene	2	ND	ND
Isophorone	2	ND	ND
Naphthalene	2	38	55
Bis(2-chloroethoxy)methan	ne 5	MD	ND
2-Chloronaphthalene	2	ND	ND
Hexachlorocyclopentadiene	25	ND	ND
Acenaphthylene	4	ND	ND
Acenaphthene	2	ND	ND
Dimethyl phthalate	2	ND	ND
2,6-Dinitrotoluene	2	ND	ND
Fluorene	2	ND	3
2,4-Dinitrotoluene	2	ND	ND
Diethyl phthalate	2	ND	ND
N-Mitrosodiphenylamine	2	ND	ND
Hexachlorobenzene	2	ND	ND

Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water (continued)

page 2 of 4

Date Received:	March 10, 1988	P.O. No.:
	111 01 1000	7-5 No . 1 MO77

Date Reported: April 21, 1988 Job No. : AT077

FOR:

ES:Atlanta/Volk ANGB

Address: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 88030572 88030573

Sample Number: VF, ET-5, GW1, ES VF, ET-4, GW1, ES

 Date Sampled:
 3-9-88
 3-9-88

 Time Sampled:
 1130
 1030

 Date Extracted:
 3-14-88
 3-14-88

Date Analyzed: 4-13-88 4-13-88

Compound	Detection Limit	ANALYTICAL RESULTS		
	ug/L	ug/L	ug/L	
Phenanthrene	5	ND	ND	
Anthracene	2	ND	ND	
Dibutyl phthalate	3	ND	ND	
Fluoranthene	2	ND	ИD	
4-Chlorophenyl phenyl	ether 4	MD	ND	
Pyrene	2	ND	ND	
Butyl Benzyl phthalat	e 3	ND	ND	
Bis(2-ethylhexyl) pht		ND	1100	
Chrysene	3	ND	ND	
4-Bromophenyl phenyl	ether 2	ND	ND	
Benzo(a)anthracene	8	ND	ND	
Di-n-octylphthalate	3	ND	ND	
Benzo(b)fluoranthene	5	ND	ND	
Benzo(k)fluoranthene	3	ND	ND	
Benzidine	60	ND	ND	
3,3'-Dichlorobenzidin	40	ND	ND	
Benzo(a)pyrene	3	ND	ND	
Indeno(1,2,3-cd)pyren	• 4	ND	ND	
Dibenzo(a,h)anthracen		ND	ND	
Benzo(ghi)perylene	4	ND	ND	

Priority Pollutant Analysis Pesticides and PCBs - EPA 625 Matrix: Water

page 3 of 4

 Date Received:
 March 10, 1988
 P.O. No.:

 Date Reported:
 April 21, 1988
 Job No.:
 AT077

FOR:

ES: Atlanta/Volk ANGB

Address: 57 Executive P

57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ATTN:

Mr. Jim Duncan

Lab Number: 88030572 88030573 Sample No.: VF, ET-5, GW1, ES VF, ET-4, GW1, ES Date Sampled: 3-9-88 3-9-88 Time Sampled: 1130 1030 3-14-88 4-13-88 Date Extracted: 3-14-88 Date Analyzed: 4-13-88

Compound	Detection Limits	ANALYTIC	AL RESULTS
	ug/L	ug/L	ug/L
Alpha-BHC	*	ND	ND
Gamma-BHC	*	ND	ND
Beta-BHC	4	ND	ND
Heptachlor	2	ND	ND
Delta-BHC	2 3 2	ND	ND
Aldrin	2	ND	ND
Heptachlor epoxide	2	ND	ND
Endosulfan I	*	ND	ND
Dieldrin	3	ND	ND
4,4'-DDE	6	ND	ND
Endrin	*	ND	ND
Endosulfan II	*	ND	ND
4,4'-DDD	3	ND	ND
4,4'-DDT	3 5	ND	ND
Endosulfan Sulfate	6	ND	ND
Endrin aldehyde	*	ND	ND
Chlordane	40	ND	ND
Toxaphene	40	ND	ND
PCB-1016	40	ND	ND
PCB-1221	40	ND	ND
PCB-1232	40	ND	ND
PCB-1242	40	ND	ND
PCB-1248	40	ND	ND
PCB-1254	40	ND	ND
PCB-1260	40	ND	ND

^{*} Detection limits have not yet been determined for these compounds

Priority Pollutant Analysis Acid Extractables -- EPA 625 Matrix: Water

page 4 of 4

Date Received:

March 10, 1988

P.O. No.:

Date Reported:

April 21, 1988

Job No. : AT077

FOR:

ES:Atlanta/Volk ANGB

Address:

57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ATTN:

Mr. Jim Duncan

Lab Number:

88030572

88030573

Sample No.:

VF, ET-5, GW1, ES

VF, ET-4, GW1, ES

Date Sampled:

3-9-88

3-9-88

Time Sampled:

1130 3-14-88 1030 3-14-88

Date Extracted: Date Analyzed:

4-13-88

4-13-88

Compound	Detection Limits	ANALYTICA	L RESULTS
	ug/L	ug/L	ug/L
2-Chlorophenol	3	ND	ND
2-Nitrophenol	4	ND	ND
Phenol	2	28	ND
2,4-Dimethylphenol	3	ND	ND
2,4-Dichlorophenol	3	ND	ND
2,4,6-Trichlorophenol	3	ND	ND
4-Chloro-3-methylphenol	3	ND	ND
2,4-Dinitrophenol	40	ND	ND
2-Methyl-4,6-Dinitrophene	01 20	ИД	ND
Pentachlorophenol	4	ND	ND
4-Nitrophenol	3	ND	ND

Approved By

NOTE: Samples are discarded 30 $a \approx 3$ after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water

page 1 of 4

Date Received:	March 10, 1988	P.O. No.:
Date Reported:	April 21, 1988	Job No. : AT077

FOR:

ES:Atlanta/Volk ANGB

Address:

57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ATTN:

Mr. Jim Duncan

Lab Number: 88030576

Sample No.: VF,ET-6,GW1,ES

Date Sampled: 3-9-88
Time Sampled: 0930
Date Extracted: 3-14-88
Date Analyzed: 4-14-88

Compound	Detection Limits	ANALYTICAL RESULTS
	ug/L	ug/L
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Hexachloroethane	2	ND
Bis(2-chloroethyl)ether	6	ND
1,2-Dichlorobenzene	2	ND
N-Nitrosodimethylamine	25	MD
Bis(2-chloroisopropyl)et	her 6	ND
N-Nitrosodi-n-propyl ami		ND
Hexachlorobutadiene	1	ND
1,2,4-Trichlorobenzene	2	ND
Nitrobenzene	2	WD
Isophorone	2	ND
Naphthalene	2	MD
Bis(2-chloroethoxy)metha	ne 5	ND
2-Chloronaphthalene	2	ND
Hexachlorocyclopentadien	e 25	ND
Acenaphthylene	4	ND
Acenaphthene	2	ND
Dimethyl phthalate	2	ND
2,6-Dinitrotoluene	2	ND
Fluorene	2	ND
2,4-Dinitrotoluene	6	ND
Diethyl phthalate	2	ND
M-Nitrosodiphenylamine	2	ND
Hexachlorobenzene	2	MD

Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water (continued)

page 2 of 4

						• •	
Date Received: Date Reported:	March 10, April 21,			-	.O. No.: ob No. :	AT077	
FOR:	ES:Atlanta	/Volk AN	GB				
Address:	57 Executi	ve Park	S.E., Suite	590			
ATTN:	Atlanta, G Mr. Jim Du		30329				
Lab Number:			880	30576			
Sample No.:				ET-6,G	W1 ,ES		
Date Sampled:				-88	•		
Time Sampled:			093	30			
Date Extracted:			3-1	4-88			
Date Analyzed:			4-1	4-88			
Compound	Det	ection imit			RESULTS		
	u	g/L		ug/L			
Phenanthrene		 5		ND			
Anthracene		2		ND			
Dibutyl phthalate	.	3		ND			
Fluoranthene		2		ND			
4-Chlorophenyl ph	nenyl ether			ND			
Pyrene		2		ND			
Butyl Benzyl phth		3		ND			
Bis(2-ethylhexyl)) phthalate			ND			
Chrysene		3		ND			
4-Bromophenyl phe		2		ND			
Benzo(a)anthracer		8 .		ND			
Di-n-octylphthala		3		ND			
Benzo(b)fluoranth		5		ND			
Benzo(k)fluoranth	nene	3		ND			
Benzidine		60		ND			
3,3'-Dichlorobena	ziaine	20		ND			
Benzo(a)pyrene		3		ND			
Indeno(1,2,3-cd);		4		ND			
Dibenzo(a,h)anthi		3		ND			
Rengolahilneruler	1 	4		ND			

Benzo(ghi)perylene

Priority Pollutant Analysis Pesticides and PCBs - EPA 625 Hatrix: Water

page 3 of 4

Date Received: Date Reported:	P.O. No.:
Jaco Mapor Cour	

FOR: ES:Atlanta/Volk ANGB

ddress: 57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 88030576

Sample No.: VF,ET-6,GW1,ES
Date Sampled: 3-9-88
Time Sampled: 0930

Date Extracted: 3-14-88
Date Analyzed: 4-14-88

Compound	Detection Limits	ANALYTICAL RESULTS
	ug/L	ug/L
Alpha-BHC	*	ND
Ganma-BHC	*	ND
Beta-BHC	4	ND
Heptachlor	2	ND
Delta-BHC	2 3 3 3	ND
Aldrin	3	ND
Heptachlor epoxide	3	ND
Endosulfan I		ND
Dieldrin	3	ND
4,4'-DDE	6	ND
Endrin	*	ИD
Endosulfan II	×	ND
4,4'-DDD	. 3	ND
4,4'-DDT	5	ND
Endosulfan Sulfate	5 6	ND
Endrin aldehyde	*	ND
Chlordane	40	ND
Toxaphene	40	ND
PCB-1016	40	ND
PCB-1221	40	ND
PCB-1232	40	ND
PCB-1242	40	ND
PCB-1248	40	ND
PCB-1254	40	ND
PCB-1260	40	ИD

^{*} EPA has not yet published detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- EPA 625

Matrix: Water

page 4 of 4

Date Received: March 10, 1988 Date Reported:

April 21, 1988

P.O. No.: Job No. : AT077

FOR:

ES: Atlanta/Volk ANGB

Address:

57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ATTN:

Mr. Jim Duncan

Lab Number:

Sample No.: Date Sampled:

Time Sampled: Date Extracted: Date Analyzed:

88030576

VF,ET-6,GW1,ES

3-9-88 0930 3-14-88

4-14-88

Compound	Detection Limits	ANALYTICAL RESULTS
	ug/L	ug/L
2.061		
2-Chlorophenol	3	ND
2-Nitrophenol	4	ND
Phenol	2	ND
2,4-Dimethylphenol	3	ND
2,4-Dichlorophenol	3	ND
2,4,6-Trichlorophenol	3	MD
4-Chloro-3-methylphenol	3	MD
2,4-Dinitrophenol	40	ND
2-Methyl-4,6-Dinitrophen	ol 20	ND
Pentachlorophenol	4	ND
4-Nitrophenol	2	ND

Isa A. Very

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE MARRATIVE Work Order Mumber 536 Sample Mos. 86030572 - 86030576

Matrix effects caused the relative percent difference for 4-chloro-3-methylphenol to be higher than EPA recommended guidelines. Analysis of spiked blanks showed the laboratory to be in control.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water

page 1 of 4

Date Received: March 10, 1988 P.O. No.: Date Reported: April 21, 1988

Job No. : AT077

FOR:

ES: Atlanta/Volk ANGB

Address:

57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ATTN:

Mr. Jim Duncan

Lab Number: Sample No.: 88030574 88030575

VF,13-W1,GW1,ES VF,ET-7,GW1,ES 3-9-88 Date Sampled: 3-9-88

Time Sampled: 0800 0900 Date Extracted: 3-14-88 3-14-88 4-13-88 Date Analyzed: 4-14-88

Compound	Detection Limits	ANALYTIC	CAL RESULTS
2	ug/L	ug/L	ug/L
1,3-Dichlorobenzene	2	ND	ND
1,4-Dichlorobenzene	•	ND	ND
Hexachloroethane	•	ND	ND
Bis(2-chloroethyl)ether		ND	
1 2-Dichlosobonsons	2		ND
1,2-Dichlorobenzene	_	ND	ND
N-Witrosodimethylamine	25	ND	ND
Bis(2-chloroisopropyl)et	her 6	ND.	ND
N-Nitrosodi-n-propyl ami	ne 25	ND	ND
Hexachlorobutadiene	1	ND	ND
1,2,4-Trichlorobenzene	2	ND	ND
Nitrobenzene	2	ND	ND
-Isophorone	2	ND	ND
Naphthalene	2	ND	26
Bis(2-chloroethoxy)metha	ne 5 2	ND	ND
2-Chloronaphthalene	2	ND	ND
Hexachlorocyclopentadien	e 25	ND	ND
Acenaphthylene	4	ND	ND
Acenaphthene	2	ND	ND
Dimethyl phthalate	2	ND	ND
2,6-Dinitrotoluene	2	ND	ND
Fluorene	2	ND	ND
2,4-Dinitrotoluene	2	ND	ND
Diethyl phthalate	2	ND	ND
N-Nitrosodiphenylamine	2	ND	ND
Hexachlorobenzene	2	ND	ND

Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water

(continued)

page 2 of 4

Date Received:	March 10. 1988	P.O. No.:
Date Reported:		Job No. : AT077

FOR:

ES: Atlanta/Volk ANGB

Address:

57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329 Mr. Jim Duncan

ATTN:

Lab Number:	88030574	88030575
Sample Number:	VF , 13-W1 , GW1 , ES	VF,ET-7,GW1,ES
Date Sampled:	3-9-88	3-9-88
Time Sampled:	0800	0900
Date Extracted:	3-14-88	3-14-88
Date Analyzed:	4-13-88	4-14-88

Compound	Detection Limit	ANALYTICAL	RESULTS
	ug/L	ug/L	ug/L
Phenanthrene	5	ND	ND
Anthracene	2	ND	ND
Dibutyl phthalate	3	ND	ND
Fluoranthene	2	ND	ND
4-Chlorophenyl phenyl et	her 4	ND	ND
Pyrene	2	ND	ND
Butyl Benzyl phthalate	3	ND	ND
Bis(2-ethylhexyl) phthal	ate 3	ND	ND
Chrysene	3 .	ND	ND
4-Bromophenyl phenyl eth	er 2	ND	ND
Benzo(a)anthracene	8	ND	ND
Di-n-octylphthalate	3	ND	ND
Benzo(b)fluoranthene	5	ND	ND
Benzo(k)fluoranthene	3	ND	ND
Benzidine	60	ND	ND
3,3'-Dichlorobenzidine	40	ND	ND
Benzo(a)pyrene	3	ND	ND
Indeno(1,2,3-cd)pyrene	4	ND	ND
Dibenzo(a,h)anthracene	3	ND	ND
Benzo(ghi)perylene	4	ND	ND

Priority Pollutant Analysis Pesticides and PCBs ~ EPA 625 Matrix: Water

page 3 of 4

			page 3
	March 10, 1988 April 21, 1988		No.: No. : AT077
Address:	ES:Atlanta/Volk ANG 57 Executive Park S Atlanta, Georgia		
	Mr. Jim Duncan		
Lab Number:		88030574	88030575
Sample No.:		VF,13-W1,GW1,ES	VF,ET-7,GW1,ES
Date Sampled:		3-9-88	3-9-88
Time Sampled:		0800	0900
Date Extracted:		3-14-88	3-14-88
Date Analyzed:	•	4-13-88	4-14-88
Compound	Detection	ANALYTICA	L RESULTS
	Limits ug/L	ug/L	ug/L
Alpha-BHC	*	ND	ND
Gamma-BHC	*	ND	ND
Beta-BHC	4	ND	ND
Heptachlor	2	ND	ND
Delta-BHC	3	ND	ND
Aldrin	2	ND	ND
Heptachlor epoxid	€ 2	ND	ИD
Endosulfan I	*	ND	ND
Dieldrin	3	ND	NĎ
4,4'-DDE	6	ND	ND
Endrin	*	ND	ND
Endosulfan II	*	ND	ND
4,4'-DDD	3	ND	ND
4,4'-DDT	5	ND	ND
Endosulfan Sulfat	e 6	ND	ND
Endrin aldehyde	*	ND	ND
Chlordane	40	ND	ND
Toxaphene	40	ND	ND
PCB-1016	40	ND	ND
PCB-1221	40	ND	ND
PCB-1232	40	ND	ND
	4.4	** 5	NB

40

40

40

40

PCB-1242

PCB-1248

PCB-1254

PCB-1260

ND

ND

ND

ND

ND

ND

ND

^{*} Detection limits have not yet been determined for these compounds

Priority Pollutant Analysis Acid Extractables -- EPA 625

Matrix: Water

page 4 of 4

D	8	t	•	R	e	C	e	i	٧	e	d	:	
_				_							•		

March 10, 1988

P.O. No.:

Date Reported:

April 21, 1988

Job No. : AT077

FOR:

ES:Atlanta/Volk ANGB

Address:

57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ATTN:

Mr. Jim Duncan

Lab	Num	ber	:
Samp	le	No.	:
	_	_	_

Date Analyzed:

Date Sampled: Time Sampled: Date Extracted: 88030574 88030575 VF,13-W1,GW1,ES VF,ET-7,GW1,ES

3-9-88 3-9-88 0800 0900 3-14-88 3-14-88 4-13-88 4-14-68

	etection Limits	ANALYTICAL RESULTS		
	ug/L	ug/L	ug/L	
2-Chlorophenol	3	ND	ND	
2-Nitrophenol	4	ND	ND	
Phenol	2	ND	3	
2,4-Dimethylphenol	3	ND	ND	
2,4-Dichlorophenol	3	ND	ND	
2,4,6-Trichlorophenol	3	ND	ND	
4-Chloro-3-methylphenol	3	ND	ND	
2,4-Dinitrophenol	40	ND	ND	
2-Methyl-4,6-Dinitropheno	1 20	ND	ND	
Pentachlorophenol	4	ND	5	
4-Nitrophenol	3	ND	ND	

NOTE:

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - EPA 625

Matrix: Water

page 1 of 4

March 5,1988 P.O. No.: Date Received: March 25,1988 Job No. : AT077 Date Reported:

FOR: ES: Atlanta/Volk ANGB

Address: 57 Executive Park S. E., Suite 590

Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

880540 Lab Number:

Sample No.: UF, 1-W1, GW1, ES

Date Sampled: 3-04-88 Time Sampled: 1545 3-07-88 Date Extracted: 3-17-88 Date Analyzed:

Compound Detection ANALYTICAL RESULTS Limits ug/L ug/L 1,3-Dichlorobenzene 2 1,4-Dichlorobenzene 2 ND ND 1,4-Dichlorobenzene 2 ND Hexachloroethane Bis(2-chloroethyl)ether 6 ND 2 ND 1,2-Dichlorobenzene 25 ND N-Nitrosodimethylamine Bis(2-chloroisopropyl)ether 6 ND ND N-Nitrosodi-n-propyl amine ND Hexachlorobutadiene 1 1,2,4-Trichlorobenzene ND Nitrobenzene 2 ND 2 ND Isophorone 2.3 Naphthalene ND Bis(2-chloroethoxy)methane 2 ND 2-Chloronaphthalene 25 ND Hexachlorocyclopentadiene ND Acenaphthylene 4 2 ND Acenaphthene Dimethyl phthalate ND 2,6-Dinitrotoluene 2 ND 2 Fluorene ND 2,4-Dinitrotoluene 6 ND 2 ND Diethyl phthalate ND N-Nitrosodiphenylamine ND Hexachlorobenzene

Priority Pollutent Analysis Base Neutrals - EPA 625 Matrix: Water (continued)

page 2 of 4

Date Received: Date Reported:	March 5,1988 March 25,1988	P.O. No.:	
FOR: Address:			
ATTN:	Mr. Jim Duncan		
Lab Number: Sample No.: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		880540 UF, 1-W1, GW1, ES 3-04-88 1545 3-07-88 3-17-88	
Compound	Detection Limit ug/L	ANALYTICAL RESULTS ug/L	
Phenenthrene	5	ND	
Anthracene	2	ND	
Dibutyl phthalat		ND	
Fluoranthene	2	ND	
4-Chlorophenyl p		ND	
Pyrene	2	ND	
Butyl Benzyl pht		ND	
Bis(2-ethylhexyl		9.0	
Chrysene	3	ND	
4-Bromophenyl ph	enyl ether 2	ND	
Benzo(a)anthrace		ND	
Di-n-octylphthal		ND ND	
Benzo(b)fluorant Benzo(k)fluorant		ND ND	
Benzidine	60	ND	
3,3'-Dichloroben		ND	
Benzo(a)pyrene	3	ND	
Indeno(1,2,3~cd)		ND	
Dibenzo(a,h)anth	* ·	ND	
Benzo(ghi)peryle		ND	

Priority Pollutant Analysis Pesticides and PCBs - EPA 625 Matrix: Water

page 3 of 4

P.O. No.: March 5,1988 Date Received: Job No. : AT077 Date Reported: March 25,1988 FOR: ES:Atlanta/Uolk ANGB 57 Executive Park S. E., Suite 590 Address: Atlanta, Georgia 30329 Mr. Jim Duncan ATTN: 880540 Lab Number: UF, 1-W1, GW1, ES Sample No .: Date Sampled: 3-04-88 Time Sampled: 1545 3-07-88 Date Extracted: 3-17-88 Date Analyzed: Detection ANALYTICAL RESULTS Compound Limits ug/L ug/L --* Alpha-BHC ND __* ND Gamma-BHC Beta-BHC ND Heptachlor ND Delta-BHC 3 ND 3 ND Aldrin 3 ND Heptachlor epoxide ND Endosulfan I Dieldrin 3 ND 4,4'-DDE ND 6 Endrin ND --* Endosulfan II ND 4,4'-DDD 3 ND 5 ND 4,4'-DDT Endosulfan Sulfate 6 ND ND --* Endrin aldehyde 40 ND Chlordane

ND

ND

ND

ND

ND

ND

ND

ND

40

40

40

40

40

40

40

40

Toxaphene

PCB-1016

PCB-1221

PCB-1232

PCB-1242

PCB-1248 PCB-1254

PCB-1260

^{*} EPA has not yet published detection limits for these compounds.

Priority Pollutant Analysis Acid Extractables -- EPA 625

Matrix: Water

page 4 of 4

Date Received:	March 5,1988	P.O. No.:
Date Reported:	March 25,1988	Job No. : AT077

FOR:

ES: Atlanta/Volk ANGB

Address:

57 Executive Park S. E., Suite 590 .

Atlanta, Georgia 30329

ATTN:

Mr. Jim Duncan

Lab Number: 880540

Sample No.: VF, 1-W1, GW1, ES

Date Sampled: 3-04-88 Time Sampled: 1545 Date Extracted: 3-07-88 Date Analyzed: 3-17-88

Compound	Detection Limits	ANALYTICAL RESULTS	
	ug/L	ug/L	
2-Chlorophenol	3	ND	
2-Nitrophenol	4	ND	
Phenol	2	ND	
2,4-Dimethylphenol	3	ND	
2,4-Dichlorophenol	3	ND	
2,4,6-Trichlorophenol	3	ND	
4-Chloro-3-methylphenol	3	ND	
2,4-Dinitrophenol	40	ND	
2-Methyl-4,6-Dinitrophen	ol 20	ND	
Pentachlorophenol	4	ND	
4-Nitrophenol	2	ND	

Laboratory Supervisor

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water

page 1 of 4

			` -
Date Received: Date Reported:	March 9, 1988 April 19, 1988		Ho.:
FOR: Address: ATTN:	ES:Atlanta/Volk AN 57 Executive Park Atlanta, Georgia Mr. Jim Duncan		
Lab Number: Sample No.: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		880565 VF, 12-W3, GW1, ES 3-8-88 0800 3-12-88 4-12-88	880566 VF, 1-W2, GW1, ES 3-8-88 0930 3-12-88 4-08-89
Compound	Detection Limits ug/L	ANALYTICAL ug/L	RESULTS ug/L
1,3-Dichlorobenz 1,4-Dichlorobenz Hexachloroethane Bis(2-chloroethy) 1,2-Dichlorobenz N-Nitrosodimethy Bis(2-chloroisop N-Nitrosodi-n-pr Hexachlorobutadi 1,2,4-Trichlorob Nitrobenzene Isophorone Naphthalene Bis(2-chloroetho 2-Chloronaphthal Hexachlorocyclop Acenaphthylene	ug/L ene 2 ene 2 l)ether 6 ene 2 lamine 25 ropyl)ether 6 opyl amine 25 ene 1 enzene 2 2 xy)methane 5 ene 2 entadiene 25 4	g / 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	99 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Acenaphthene Dimethyl phthala 2,6-Dinitrotolue Fluorene 2,4-Dinitrotolue Diethyl phthalat N-Nitrosodipheny	2 te 2 ne 2 ne 2 lamine 2	70 70 70 70 70 70 70	20 20 20 20 20 20 20 20 20 20 20 20 20 2

ND

ND

2

Hexachlorobenzene

Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water (continued)

page 2 of 4

			page 2 of
Date Received: Date Reported:	March 9, 1988 April 19, 1988		: AT077
FOR: Address:	ES: Atlanta/Volk ANGE 57 Executive Park S. Atlanta, Georgia		
ATTN:	Mr. Jim Duncan		
Lab Number: Sample Number: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		880565 UF, 12-W3, GW1, ES 3-8-88 0800 3-12-88 4-12-88	880566 VF, 1-W2, GW1, ES 3-8-88 0930 3-12-88 4-08-88
Compound	Detection	ANALYTICAL R	ESULTS
	Limit ug/L	ug/L	ug/L
Phenanthrene	5	NO	ND
Anthracene	2	ND	ND
Dibutyl phthalate		ND	ND
Fluoranthene	2	NO	ND
4-Chlorophenyl pi	henyl ether 4	NO	NO
Pyrene	2	ND	ND
Butyl Benzyl pht	helate 3	NO	ND
Bis(2-ethylhexyl		ND	ND
Chrysene	3	NO	ND
4-Bromophenyl pho		ND	ND
Benzo(a)anthrace		ND	ND
Di-n-octylphthale		NO	ND
Benzo(b)fluoranti		ND	ND
Benzo(k)fluoranti		ND	ND
Benzidine	60	ND	ND
3,3'-Dichloroben		NO	ND
Benzo(a)pyrene	3	NO	NO
Indeno(1,2,3-cd);		NO NO	ND
Dibenzo(a,h)anth		ND	ND

Benzo(ghi)perylene

ND

Priority Pollutant Analysis Pesticides and PCBs - EPA 625

Matrix: Water

page 3 of 4 March 9, 1988 P.O. No.: Date Received:

April 19, 1988 Job No. : AT077 Date Reported:

FOR: ES: Atlanta/Volk ANGB

57 Executive Park S.E., Suite 590 Address:

Atlanta, Georgia 30329

Detection

ATTN: Mr. Jim Duncan

Compound

Lab Number: 880565 880566

Sample No.: VF, 12-W3, GW1, ES VF, 1-W2, GW1, ES

ANALYTICAL RESULTS

3-8-88 Date Sampled: 3-8-88 Time Sampled: 0800 0930 3-12-88 3-12-88 Date Extracted:

Date Analyzed: 4-12-88 4-09-88

	Limits ug/L	ug/L	ug/L	
Alpha-8HC		ND	ND	
Gamma-BHC	*	ND	ND	
Beta-BHC	4	ND	ND	
Heptachlor	2 3 2 2	ND	ND	
Delta-BHC	3	ND	ND	
Aldrin	2	ND	ND	
Heptachlor epoxide	2	ND	ND	
Endosulfan I	*	ND	ND	
Dieldrin	3	ND	ND	
4,4'-DDE	6	ND	ND	
Endrin	*	ND	ND	
Endosulfan II	*	ND	ND	
4,4'-DDD	3 5	ND	ND	
4,4'-DDT		ND	ND	
Endosulfan Sulfate	6	ND	ND	
Endrin aldehyde	*	ND	ND	
Chlordane	40	ND	ND	
Toxaphene	40	ND	ND	
PC8-1016	40	ND	ND	
PCB-1221	40	ND	ND	
PCB-1232	40	ND	ND	
PCB-1242	40	ND	ND	
PC8-1248	40	ND	ND	
PCB-1254	40	ND	ND	
PCB-1260	40	ND	ND	

^{*} Detection limits have not yet been determined for these compounds

Priority Pollutant Analysis Acid Extractables -- EPA 625

Matrix: Water

page 4 of 4

Date Received:	March 9, 1988	P.O. No.:
Osta Basastad:	April 19 1999	Joh No · ATT77

ES: Atlanta/Volk ANGB

Address:

57 Executive Park S.E., Suite 590

Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number:	880565	880566
Sample No.:	VF, 12-W3, GW1, ES	UF, 1-W2, GW1, ES
Date Sampled:	3-8-88	3-8-88
Time Sampled:	0800	0930
Date Extracted:	3-12-88	3-12-88
Date Analyzed:	4-12-88	4-08-88

Compound	Detection Limits	ANALYTICAL RESULTS	
	ug/L	ug/L	ug/L
2-Chlorophenol	3	NO	ND
2-Nitrophenol	4	NO	ND
Pheno 1	2	NO	ND
2,4-Dimethylphenol	3	ND	ND
2,4-Dichlorophenol	3	ND	ND
2,4,6-Trichlorophenol	3	ND	ND
4-Chloro-3-methylphenol	. 3	ND	ND
2,4-Dinitrophenol	40	ND	ND
2-Methyl-4,6-Dinitrophe	nol 20	ND	ND
Pentachlorophenol	4	ND	ND
4-Nitrophenol	3	ND	ND

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water

page 1 of 4

1			bede r or
	Parch 8, 1988 pril 12, 1988		0. No.: b No.: AT077
Address: 5	S:Atlanta/Uolk AN 7 Executive Park, Itlanta, Georgia		
	r. Jim Duncan		
Lab Number: Sample No.: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		880553 UF,2-2,SW1,ES 3-7-88 1500 3-11-88 4-11-88	880554 VF,1-W3,GW1,ES 3-6-88 1530 3-11-88 4-11-88
Compound	Detection	ANALYTICAL RESULTS	
	Limits ug/L	ug/L	ug/L
1,3-Dichlorobenzen		ND	ND
1,4-Dichlorobenzen		ND	ND
Hexachloroethane	2	ND	ND
Bis(2-chloroethyl)		ND	ND
1,2-Dichlorobenzen		ND	ND
N-Nitrosodimethyla		ND	ND
Bis(2-chloro:sopro		ND	ND
N-Nitrosodi-n-prop		ND	ND NB
Hexachlorobutadien		ND ND	ND ND
1,2,4-Trichloroben Nitrobenzene	2	ND	ND
Isophorone	2	ND	ND
Naphthalene	2	ND	11
Bis(2-chloroethoxy		ND	ND
2-Chloronaphthalen		ND	ND
Hexachlorocyclopen		ND	ND
Acenaphthylene	4	ND	ND
Acenaphthene	2	ND	ND
Dimethyl phthalate	2	ND	ND
2,6-Dinitrotoluene	2	ND	ND
Fluorene	2	ND	ND
2,4-Dinitrotoluene		ND	ND
Diethyl phthalate	2	ND	ND
N-Nitrosodiphenyla		ND	ND
Hevachlorobenzene	2	ďИ	ЙN

ND

ND ND

Hexachlorobenzene

Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water (continued)

page 2 of 4

Date Received: Date Reported:	March 8, 1988 April 12, 1988		No.:
FOR: Address:	ES:Atlanta/Volk ANG 57 Executive Park, 9 Atlanta, Georgia 3	S.E., Suite 590	
ATTN:	Mr. Jim Duncan		
Lab Number: Sample Number: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		880553 UF,2-2,SW1,ES 3-7-88 1500 3-11-88 4-11-88	880554 VF,1-W3,GW1,ES 3-6-88 1530 3-11-88 4-11-88
Compound	Detection	ANALYTICAL	RESULTS
	Limit ug/L	ug/L	ug/Ľ
Phenanthrene	5	ND	ND
Anthracene	2	ND	ND
Libutyl phthalat	e 3	ND	ND
Fluoranthene	2	ND	ND
4-Chlorophenyl p		ND	ND
Pyrene	2	ND	ND
Butyl Benzyl pht		ND	ND
Bis(2-ethylhexyl		ND	ND
Chrysene	3	ND	ZD Z
4-Bromophenyl ph		D	ND ND
Benzo(a)anthrace		ND ND	77
Di-n-octylphthal Benzo(b)fluorant		ND	70
Benzo(k)fluorant		ND	ND
Benzidine	60	ND	ND
3,3'-Dichloroben		ND	ND
Benzo(a)pyrene	3	ND	ND
Indeno(1,2,3-cd)		ND	ND
Dibenzo(a,h)anth	• 3	ND	ND
Benzo(ghi)peryle		ND	D

Priority Pollutant Analysis Pesticides and PCBs - EPA 625 Matrix: Water

matrix: water page 3 of 4

Date Received: March 8, 1988 P.O. No.:

Date Reported: April 12, 1988 Job No.: AT077

FOR: ES:Atlanta/Uolk ANGB

Address: 57 Executive Park, S.E., Suite 590

Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880553 880554

 Sample No.:
 VF,2-2,SW1,ES
 VF,1-W3,GW1,ES

 Date Sampled:
 3-7-88
 3-6-88

 Time Sampled:
 1500
 1530

Date Extracted: 3-11-88 3-11-88
Date Analyzed: 4-11-88

Compound	Detection Limits	ANALYTICAL RESULTS	
•	ug/L	ug/L	ug/L
Alpha-BHC	*	ND	ND
Gamma-BHC	*	ND	ND
Beta-BHC	4	ND	ND
Heptachlor	2	ND	ND
Delta-BHC	3	ND	ND
Aldrin	2 3 2 2	ND	ND
Heptachlor epoxide	2	ND	ND
Endosulfan I	*	ND	ND
Dieldrin	3	ND	ND
4,4'-DDE	6	ND	ND
Endrin	*	ND	ND
Endosulfan II	*	ND	ND
4,4'-DDD	3	ND	ND
4,4'-DDT	3 5 6	ND	ND
Endosulfan Sulfate	6	ND	ND
Endrin aldehyde	*	ND	ND
Chlordane	40	ND	ND
Toxaphene	40	ND	ND
PCB-1016	40	ND	ND
PCB-1221	40	ND	ND
PCB-1232	40	ND	ND
PCB-1242	40	ND	ND
PCB-1248	40	ND	ND
PCB-1254	40	ND	ND
PCB-1260	40	ND	ND

^{*} Detection limits have not yet been determined for these compounds

Priority Pollutant Analysis Acid Extractables -- EPA 625 Matrix: Water

page 4 of 4

Da	te	Rece	ived	:
_		_		

March 8, 1988

P.O. No.:

Date Reported:

April 12, 1988

Job No. : AT077

FOR:

ES:Atlanta/Volk ANGB

Address:

Lab Number:

57 Executive Park, S.E., Suite 590

•

Atlanta, Georgia 30329

ATTN:

Mr. Jim Duncan

	le No.:
-	Sampled:
Time	Sampled:
Date	Extracted:
Date	Analuzed:

880553 VF,2-2,SW1,ES VF,1-W3,GW1,ES

3-7-88 3-6-88 1500 1530 3-11-88 3-11-88 4-11-88 4-11-88

•	etection Limits	ANALYTICAL RESULTS	
	ug/L	ug/L	ug/L
2-Chlorophenol	3	ND	ND
2-Nitrophenol	4	ND	ND
Phenol	2	ND	11
2,4-Dimethylphenol	3	ND	4
2,4-Dichlorophenol	3	ND	ND
2,4,6-Trichlorophenol	3	ND	ND
4-Chloro-3-methylphenol	3	ND	ND
2,4-Dinitrophenol	40	ND	ND
2-Methyl-4,6-Dinitropheno	1 20	ND	ND
Pentachlorophenol	4	ND	ND
4-Nitrophenol	3	ND	ND

Analyst Se

Approved Bu

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water

page 1 of 4

Date Received:	March 5,1988	P.O. No.:
Date Reported:	March 25,1988	Job No. : AT077

FOR:

ES:Atlanta/Volk ANGB

Address:

57 Executive Park S. E., Suite 590

Atlanta, Georgia 30329 Mr. Jim Duncan

ATTN:

Lab Number: Sample No.: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		880536 UF, 2-W1, GW1, ES 3-04-88 0915 3-07-88 3-18-88	880537 UF, 1-W4, GW1, ES 3-04-88 1500 3-07-88 3-18-88
Compound	Detection Limits ug/L	ANALYTICAL ug/l	RESULTS ug/L
		ag. o	
1,3-Dichlorobenzene	2	ND	ND
1,4-Dichlorobenzene	2	ND	ND
Hexachloroethane	2	ND	ND
Bis(2-chloroethyl)eth	er 6	ND	ND
1,2-Dichlarobenzene	2	ND	ND
N-Nitrosodimethylamin	25	ND	ND
Bis(2-chloroisopropyl	ether 6	ND	ND
N-Nitrosodi-n-propyl		ND	ND
Hexachlorobutadiene	1	ND	ND
1,2,4-Trichlorobenzen		ND	ND
Nitrobenzene	2	ND	ND
Isophorone	2	ND	ND
Naphthalene	2 2	ND	19
Bis(2-chloroethoxy)me		ND	ND
2-Chloronaphthalene	2	ND	ND
Hexachlorocyclopentad	iene 25	ND	ND
Acenaphthylene	4	ND	ND
Acenaphthene	2	ND	ND
Dimethyl phthalate	2	ND	ND
2,6-Dinitrotoluene	2	ND	ND
Fluorene	2 2 2 2	ND	ND
2,4-Dinitrotoluene	2	ND	ND
Diethyl phthalate	2	ND	ND
N-Nitrosodiphenylamin		ND	ND
Hexachlorobenzene	2	ND	ND

Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water (continued)

page 2 of 4

Date Received: Date Reported:	March 5,1988 March 25,1988		o.: . : AT077
FOR: Address:	ES:Atlanta/Volk ANG 57 Executive Park S Atlanta, Georgia		
ATTN:	Mr. Jim Duncan		
Lab Number: Sample Number: Date Sampled:		880536 UF, 2-W1, GW1, ES 3-04-88	3-04-88
Time Sampled: Date Extracted: Date Analyzed:		0915 3-07-88 3-18-88	1500 3-07-00 3-10-00
Compound	Detection	ANALYTICAL 1	RESULTS
	Limit ug/L	ug/L	ug/L
Phenanthrene	5	ND	ND
Anthracene	2	ND	ND
Dibutyl phthalat		ND	ND
Fluoranthene	2	ND	ND
4-Chlorophenyl p	henyl ether 4	ND	ND
Pyrene	2	ND	ND
Butyl Benzyl pht		ND	ND
Bis(2-ethylhexyl		11	ND
Chrysene	3	ND	ND
4-Bromophenyl ph		ND	ND
Benzo(a)anthrace		ND	ND
Di-n-octylphthal Benzo(b)fluorant		ND ND	ND ND
			ND
Benzo(k)fluorant Benzidine	nene 3 60	ND ND	ND
3,3'-Dichloroben	- -	ער מא	ND
Benzo(a)pyrene	3	ND	ND
Indeno(1,2,3-cd)		ND	ND
Dibenzo(a,h)anth	F /	ND	ND
Benzo (chi) nerule		מא	ND

Benzo(ghi)perylene

ND

Priority Pollutant Analysis Pesticides and PCBs - EPA 625

Matrix: Water

			page 3 of
Date Received: Date Reported:	March 5,1988		No.:
	•		,
	ES: Atlanta/Volk ANGE		
Address:	57 Executive Park S.	E., Suite 590	
ATTN:	Atlanta, Georgia 3 Mr. Jim Duncan	0329	
Lab Number:		880536	99053 <i>7</i>
Sample No.:			
Date Sampled:		3-04-88	UF, 1-W4, GW1, ES 3-04-88
Time Sampled:		0915	1500
Date Extracted:		3-07-00	3-07-08
Date Analyzed:		3-18-88	3-19-88
Compound	Detection Limits	ANALYTICAL	RESULTS
	ug/L	ug/L	ug/L
Alpha-BHC	*	ND	ND
Gamma-BHC	*	ND	ND
Beta-BHC	4	ND	ND
Heptachlor	2 3	ND	ND
Delta-EHC Aldrin	2	ND	ND
		ND	ND
Heptachlor epoxid Endosulfan I	*	ND ND	ND ND
Dieldrin	3	ND	ND
4,4'-DDE	6	ND C	ND
Endrin	*	HD	ND
Endosulfan II	*	ND	ND
4,4'-DDD	3	ND	ND
4,4'-DDT	5	ND	ND
Endosulfan Sulfat		ND	ND
Endrin aldehyde		ND	ND
Chlordane	40	ND	ND
Toxaphene	40	ND	ND
PCB-1016	40	ND	ND
PCB-1221	40	ND	ND
PCB-1232	40	MD	ND
PCB-1242	40	ND	ND
PCB-1248	40	ND	ND
D/ID 1084	40	A I PA	A1D

40

40

PCB-1254

PCB-1260

ND

ND

ND

ND

^{*} Detection limits have not yet been determined for these compounds

Priority Pollutant Analysis Acid Extractables -- EPA 625 Matrix: Water

page 4 of 4

Date	Received:	March 5,1988	P.O. No.:	

Date Reported: March 25,1988 Job No.: AT077

FOR: ES:Atlanta/Uolk ANGB

Address: 57 Executive Park S. E., Suite 590 .

Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880536 880537 Sample No.: UF, 2-U1, GU1, ES UF, 1-U4, GU1, ES

 Date Sampled:
 3-04-88
 3-04-88

 Time Sampled:
 0915
 1500

 Date Extracted:
 3-07-88
 3-07-88

 Date Analyzed:
 3-18-88
 3-18-88

Compound Detection ANALYTICAL RESULTS
Limits
ug/L ug/L ug/L

-	g/L	ug/L	ug/L
2-Chlorophenol	3	ND	ND
2-Nitrophenol	4	ND	ND
Phenol	2	an	ND
2,4-Dimethylphenol	3	ND	ND
2,4-Dichlorophenol	3	ND	ND
2,4,6-Trichlorophenol	3	ND	ND
4-Chloro-3-methylphenol	3	ND	ND
2,4-Dinitrophenol	40	ND	ND
2-Methyl-4,6-Dinitrophenol	20	ND	ND
Pentachlorophenol	4	ND	ND
4-Nitrophenol	3	ND	ND

Lawa Kuck

Approved By

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water

page 1 of 4

Date Received: Date Reported: FOR:	March 5,1988 March 25,1988 ES:Atlanta/Volk AN	Job	No.:
Address	57 Executive Park		
ATTN:	Atlanta, Georgia Mr. Jim Duncan	3032 9	
Lab Number:		880538	880539
Sample No.:		UF, 1-45, GW1, ES	UF, 2-W2, GW1, ES
Date Sampled:		3-04-88	3-04-88
Time Sampled:		1600	1130
Date Extracted:		3-07-88	3-07-88
Date Analyzed:		3-18-88	3-18-88
Compound	Detection Limits	ANALYTICA	L RESULTS
	ug/L	ug/L	ug/L
1,3-Dichlorobens	ene 2	ND	ND
■ 1,4-Dichlorobenz	ene 2	ND	ND
Hexachloroethane	2	ND	ND
Bis(2-chloroethy)		ND	ND
_ 1,2-Dichlorobenzo		ND	ND
N-Nitrosodimethy:		ND	ND
Bis(2-chloroisop		ND	ND
N-Nitrosodi-n-pro		ND	ND
Hexachlorobutadio		ND	ND
1,2,4-Trichlorobe	enzene 2 2	ND ND	ND ND
_ Isophorone	2	ND	ND
Naphthalene	2	ND	ND
Bis(2-chloroetho		ND	ND
2-Chloronaphthal		ND	ND
Hexachlorocyclope		ND	ND
Acenaphthylene	4	ND	ND
Acenaphthene	2	ND	ND
Dimethyl phthala		ND	ND
2,6-Dinitrotolue		ND	ND
Fluorene	2	ND	ND
2,4-Dinitrotolue		ND	ND
Diethyl phthalate		ND	ND
N-Nitrosodipheny: Hexachlorobenzen		ND ND	ND ND
	2	MU	ND

Priority Pollutant Analysis Base Neutrals - EPA 625 Matrix: Water

(continued)

page 2 of 4

Date Received:	March 5,1988	P.O. No.:
Date Reported:	March 25 1988	Joh No. : AT022

FOR:

ES: Atlanta/Volk ANGB

Address:

57 Executive Park S. E., Suite 590 Atlanta, Georgia 30329 Mr. Jim Duncan

ATTN:

Lab Number:	880538	880539
Sample Number:	uf, 1- 45 , 64 1, es	UF, 2-W2, GW1, ES
Date Sampled:	3-04-88	3-04-88
Time Sampled:	1600	1130
Date Extracted:	3-07-98	3-07-8 8
Date Analyzed:	3-19-88	3-18-88

Compound	Detection Limit	ANALYTICAL	RESULTS
	ug/L	ug/L	ug/L
Phenenthrene	5	ND	ND
Anthracene	2	ND	ND
Dibutyl phthalate	3	ND	ND
Fluoranthene	2	ND	ND
4-Chlorophenyl phenyl	ether 4	ND	ND
Pyrene	2	ND	ND
Butyl Benzyl phthalate	3	ND	ND
Bis(2-ethylhexyl) phth		ND	ND
Chrysene	3	ND	ND
4-Bromophenyl phenyl e	ther 2	ND	ND
Benzo(a)anthracene	9	ND	ND
Di-n-octylphthalate	3	ND	ND
Benzo(b)fluoranthene	3 5	ND	ND
Benzo(k)fluoranthene	3	ND	ND
Benzidine	60	ND	ND
3,3'-Dichlorobenzidine	40	ND	ND
Bénzo(a)pyrene	3	ND	ND
Indeno(1,2,3-cd)pyrene	4	ND	ND
Dibenzo(a,h)anthracene		ND	ND
Benzo(ghi)perylene	4	ND	ND

Priority Pollutant Analysis Pesticides and PCBs - EPA 625

Matrix: Water

page 3 of 4

Date Received: Date Reported:		P.O. No.: Job No. : AT077
Date Reported:	March 25,1988	Job No. : AT077

FOR:

ES: Atlanta/Volk ANGB

Address:

57 Executive Park S. E., Suite 590

Atlanta, Georgia 30329 Mr. Jim Duncan

ATTN:

Lab Number: Sample No.: Date Sampled: Time Sampled: Date Extracted: Date Analyzed:		880538 UF, 1-W5, GW1, ES 3-04-88 1600 3-07-88 3-18-88	880539 UF, 2-W2, GW1, ES 3-04-88 1130 3-07-88 3-18-88
Compound	Detection	ANALYTICAL	RESULTS

Compound	Limits	HOMETICHE RESULTS		
	ug/L	ag/L	ug/L	
Alpha-BHC	*	ND	ND	
Gamma-BHC	*	ND	ND	
Beta-BHC	4	ND	ND	
Heptachlor	4 2 3 2 2	ND	ND	
Delta-RHC	3	ND	ND	
Aldrin	2	ND	ND	
Heptachlor epoxide	2	ND	ND	
Endosulfan I	*	ND	ND	
Dieldrin	3 6	ND	ND	
4,4'-DDE	6	ND	ND	
Endrin	*	ND	ND	
Endosulfan II	*	ND	ND	
4,4'-DDD	3	ND	ND	
4,4'-DDT	3 5 6	ND	ND	
Endosulfan Sulfate	6	ND	ND	
Endrin aldehyde	*	ND	ND	
Chlordane	40	ND	ND	
Toxaphene	40	ND	ND	
PCB-1016	40	ND	ND	
PCB-1221	40	ND	ND	
PCB-1232	40	ND	ND	
PCB-1242	40	ND	ND	
PCB-1248	40	ND	ND	
PCB-1254	40	ND	ND	
PCB-1260	40	ND	ND	
i				

^{*} Detection limits have not yet been determined for these compounds

Priority Pollutant Analysis Acid Extractables -- EPA 625 Matrix: Water

page 4 of 4

March 5,1988 Date Received: P.O. No.:

March 25,1988 Job No. : AT077 Date Reported:

FOR: ES: Atlanta/Volk ANGB

57 Executive Park S. E., Suite 590 Address:

Atlanta, Georgia Mr. Jim Duncan 30329

ATTN:

Lab Number: 880539 UF, 1-W5, GW1, ES Sample No.: UF, 2-W2, GW1, ES Date Sampled: 3-04-88 3-04-88 Time Sampled: 1600 1130 Date Extracted: 3-07-88 3-07-88

Date Analyzed: 3-18-88 3-18-88

Compound	Detection	ANALYTICAL RESULTS		
	Limits ug/L	ug/L	ug/L	
2-Chlorophenol	3	ND	ND	
2-Nitrophenol	4	ND	ND	
Phenol	2	ND	ФИ	
2,4-Dimethylphenol	3	ND	ND	
2,4-Dichlorophenol	3	ND	MD	
2,4,6-Trichlorophenol	3	ND	ND	
4-Chloro-3-methylphenol	3	ND	ND	
2,4-Dinitrophenol	40	ND	ND	
2-Methyl-4,6-Dinitropher	nol 20	ND	ND	
Pentachlorophenol	4	ND	ND	
4-Nitrophenol	3	ND	ND	

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ANALYTICAL RESULTS FOR METALS

ENGINEERING SCIENCE INC. 05/13/88

PAGE 1

ANALYSIS REPORT

WORK ORDER NUMBER: 467

JOB NUMBER

: ZB0000000400

WORK ORDER DATE : 01/27/88

REPORT DATA:

ES ATLANTA/VOLK FIELD ANG8

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

JIMMY DUNCAN

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

* OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

CONTACT

: JIMMY DUNCAN

(404)-325-0770

TEST COMPOUND	VF1,8-3,SS-3, 8.5' 88010186	VF1,8-21,SS-1, 1.0' 88010187	VF1,B-22,SS-1, 0.5' 88010188	VF1,B-4,SS-1, 0.5' 88010189	UF1,8-1,SS-1, 0.5' 88010190	VF1,8-1,SS-2, 3.5' 88010191
3050	NA	HA	NA	MA	MA	NA
PB-F	<0.5	1.6	85.0	62.05	5.7	0.8

ENGINEERING SCIENCE INC. 05/13/88

PAGE 2

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TEST COMPOUND	VF1,B-1,SS-3, 8.5' 88010192	VF1.B-2.SS-1, 0.5' 88010193	UF1,8-2,SS-2, 3.5' 88010194	VF1,B-2,SS-3, 8.5' 88010195	VF1,B-3,SS-1, 1.0' 88010196	WF1,8-3,SS-2, 3.5' 88010197
3050	NA	HA	MA	NA	NA	NA
PB-F	0.6	1.8	<0.5	<0.5	1.7	<0.5

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

1	VF1,B-4,SS-2,	VF1,8-4,SS-3,
	3.5'	8.5'
TEST COMPOUND	88010198	89010199
3050	NA	NA
PB-F	3.9	0.9

DETECTION LIMITS ENVIRONMENTAL QUALITY PARAMETERS SAMPLES NO.: 88010186-88010199

Parameter	Units	Detection Limits
SW7421		
PB-F,	mg/KG	0.5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

ENGINEERING SCIENCE INC. 05/13/88

PAGE 1

ANALYSIS REPORT

WORK ORDER HUMBER:

474

JOB NUMBER : ZB0000000400 WORK ORDER DATE : 01/29/88

Lab Supervisor

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGB 57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329 JIMMY DUNCAN

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

CONTACT

: JIMMY DUNCAN

(404)-325-0770

TEST COMPOUND	VF1,B-26,SS-1, O' 88010214	VF1,8-9,5\$-2, 3.5' 88010215	VF1,8-9,55-3, 8.5' 88010216	VF1,B-8,SS-1, 0' 88010217	VF1,8-8,SS-2, 3.5' 88010218	WF1,B-0,SS-3, 8.5' 88010219
305 0	NA	MA	NA	HA	MA	MA
PB-F	2.3	0.9	<0.5	11.05	0.5	<0.5

ENGINEERING SCIENCE INC. 05/13/88

PAGE 2

AMALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 2, UNITS: mg/KG

VF1,8-9,SS-1, 0'

TEST COMPOUND 88010220

3050 NA

PB-F 2.3

DETECTION LIMITS ENVIRONMENTAL QUALITY PARAMETERS SAMPLES NO.: 88010214-88010220

Parameter	Units	Detection Limits
SW7421		
PB-F	mg/KG	0.5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- * Puplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

ENGINEERING SCIENCE INC. 05/13/88

PAGE 1

85)

AMALYSIS REPORT

WORK ORDER HUMBER: 489

JOB NUMBER WORK ORDER DATE : 02/10/88

: ZB0000000400

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGB 57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329 JIMMY DUNCOM

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

CONTACT

: JIMMY DUNCAN

(404)-325-0770

TEST COMPOUND	UF1,8-10,55-1,	UF1,8-27,SS-1,	UF1,B-10,SS-2,	VF1,B-10,SS-3,	VF1,B-11,SS-1,	VF1,8-11,55-2
	0.5'	0.5'	3.5'	8.5'	1.0'	3.5'
	88020289	88020290	88020291	88020292	88020293	88020294
3050 PB-F	HR 4.4	HA 4.05	NA 1.0	NA <0.5	NA 1.8	NA 0.6

ENGINEERING SCIENCE INC. 05/13/88

PAGE 2

AMALYSIS REPORT FOR WORK ORDER NUMBER 489

TEST COMPOUND	VF1,B-11,SS-3, 8.5' 88020295	VF1,B-12,SS-1 1.0' 88020296	UF1,B-12,SS-2, 3.5' 88020297	VF1,8-12,SS-3, 8.5' 88020298	VF1,B-13,SS-1, 1.5' 88020299	VF1,8-28,SS-1, 1.5' 88020300
3050	NA	HA	HA	HA	MA	NA
PB-F	0.9	2.2	1.5	0.7	0.8	2.4

DETECTION LIMITS ENVIRONMENTAL QUALITY PARAMETERS SAMPLES NO.: 88020289-88020300

Parameter	Units	Detection Limits
SW7421		
PB-F	mg/KG	0.5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

LEGEND FOR RESULT QUALIFIERS

- Page 1 Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- * Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

ENGINEERING SCIENCE INC. 05/13/88

PAGE 1

AMALYSIS REPORT

IORK ORDER NUMBER:

500

JORK ORDER DATE : 02/11/88

JOB NUMBER : ZB000000400

APPROVED BY

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGB 57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

JIMMY DUNCAN

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

CONTACT

: JIMMY DUNCAN

(404)-325-0770

TEST COMPOUND	VF1,8-14,SS-3,	VF1,B-15,SS-1,	VF1,B-15,SS-2,	VF1,8-15,SS-3,	VF1,8-13,5S-2,	UF1,8-13,55-3,
	8.5'	0.5'	3.5'	8.5'	3.5'	8.5'
	88020371	88020372	88020373	88020374	88020375	88020376
3050 PB-F	NA 0.6	HA 1.7	NA <0.5	NA <0.5	NA 0.6	HA <0.5

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

	VF1,B-14,SS-1, 1.0'	VF1,B-14,SS-2, 3.5'
TEST COMPOUND	88020377	88020378
3050	NA	NA
PB-F	7.1	1.0

DETECTION LIMITS ENVIRONMENTAL QUALITY PARAMETERS SAMPLES NO.: 88020371-88020378

Parameter	Units	Detection Limits
SW7421		
PB_F	mg/KG	0.5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- * Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

ENGINEERING SCIENCE INC. 05/13/88

PAGE 1

ANALYSIS REPORT

WORK ORDER NUMBER: 472

JOB NUMBER : 2B0000000400 WORK ORDER DATE : 01/28/88

PROVED BY June 1 June Supervisor

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGB 57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329 JIMMY DUNCAN CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGB (85)

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

CONTACT : JIMMY DUNCAN

(404)-325-0770

TEST COMPOUND	VF1,B-7,SS-3, 8.5' 88010204	VF1,8-6,SS-2, 3.5' 88010205	VF1,B-6,SS-3, 8.5' 88010206	VF1,8-7,SS-1, 0' 88010207	VF1,B-7,SS-2, 3.5' 88010208	VF1,8-5,5S-1,0'
3050	MA	MA	NA	MA	MA	HA
PB-F	<0.5	55.0	1.9	1.8	0.9	5.8

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

	VF1,8-5,SS-2,	VF1,B-5,SS-3,	VF1,B-6,SS-1,	
	3.5'	10.0'	0'	
TEST COMPOUND	88010210	88010211	88010212	
3050	NA	MA	MA	
PB-F	1.2	<0.5	77.5	

DETECTION LIMITS ENVIRONMENTAL QUALITY PARAMETERS SAMPLES NO.: 88010204-88010212

Parameter	Units	Detection Limits
SW7421		
PB-F	mg/KG	0.5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- * Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

ENGINEERING SCIENCE INC. 05/27/88

PAGE 1

ANALYSIS REPORT

JRK ORDER NUMBER:

534

18 NUMBER

: ZB0000000400

JRK ORDER DATE : 03/08/88

EPORT DATA:

5 ATLANTA/JOLK FIELD ANGB

7 EXECUTIVE PARK STE. 590

TLANTA, GA 30329

IMMY DUNCAN

CLIENT DATA:

ES ATLANTA/UOLK FIELD ANGS (85)

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

ONTRACT / PO # : ATO77

ONTACT

: JIMMY DUNCAN

(404)-325-0770

ASK: 2, UNITS: mg/L

UF,2-85,GW1.ES UF,2-1,SW1.ES UF,2-2,SW1.ES UF,1-W3,GW1.ES UF.10-W1.GW1.ES UF,2-W3,GW1.ES

	• • • • • • • • • • • • • • • • • • • •	• •				
EST COMPOUND	88030551	88030552	88030553	88030554	88030555	88030556
020	,			NA	NA	
}-f				0.005 u	<.005¥	
110	NA	NA	NA			NA
20	NA	NA	HA		•	NA
-A	<0.01M	<0.01M	<0.01M			<0.01N
- 6	<0.005	<0.005	<0.005			<0.005
-A	<0.001	<0.001	<0.001			<0.001
-H	.0.010	<0.010	<0.010			< 0.010
-A	< 0.010	<0.010	< 0.010			<0.010
-A	< 0.010	<0.010	0.018			<0.01B
-C	<.0002	٠.0002	<.0002			<.0002
-Ŋ	< 0.010	<0.010	<0.010			<0.010
-f	<0.005	<0.005	0.007			<.005W
-A	<0.06	<0.06	<0.06			<0.06
- f	<0.005	<0.005	<0.005			<0.005
-A	<0.10	<0.10	0.12			<0.10
I-A	0.03	0.02	0.04			0.02

ANALYSIS REPORT FOR WORK ORDER HUMBER 536

TASK: 2. UNITS: mg/L

UF.2-W4.GB1.ES UF.10-W2.GB1.ES UF.10-W3.GB1.ES UF.10-W5.GB1.ES UF.10-W4.GB1.ES UF.12-W2.GB1.ES

TEST	COMPOUND	88030557	88030558	88630559	88030560	88030561	88030542
3020			HA	HA	MA	M	
P8-F			0.0 08W	<. 005W		0.0048	
3010		HA					MA
3020		MA					HA
AG-A		<0.01N					· 9.01N
HS-F		:0.005	,				<.005 U
8E-N		0.0018					<0.001
CD-A		<0.010					<0.010
CR-A		0.018					<0.01
CU-A		0.018					<0.01
HC-C		<.0002					<.0002
ni-A		<0.010					<0.010
78-F		<.0058					<0.005
58-A		<0.06					<0.04
îE-F		<0.005					<0.005
TL-A		<0.10					.0.10
ZN-W		0.03					0.01E

REPORTING LEVELS AND MDL'S FOR METALS SAMPLES NO.: 880305551-88030562

Metal	MDL (ES) mg/L	Reporting Limits mg/L
	•	
Aluminum	0.1	0.2
Antimony	0.1	0.1
Arsenic	0.005	0.005
Barium	0.01	0.2
Beryllium	0.001	0.005
Boron	0.1	0.1
Cadmium	0.01	0.01
Calcium	0.1	5.0
Chromium	0.01	0.05
Cobalt	0.01	0.05
Copper	0.01	0.025
Iron	0.01	0.1
Lead	0.005	0.005
Magnesium	0.1	5.0
Manganese	0.01	0.015
Mercury	0.0002	0.0002
Molybdenum	0.1	0.1
Nickel	0.01	0.04
Potassium	1.0	5
Selenium	0.0 05	0.005
Silica	0.1	0.1
Silver	0.01	0.05
Sodium	0.1	5.0
Thallium	0.1	0.1
Vanadium	0.1	0.1
Zine	0.01	0.02

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- * Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

ENGINEERING SCIENCE INC. 05/09/88

PASE 1

ANALYSIS REPORT

K ORDER HUMBER:

530

NUMBER

: ZB0000000400 K ORDER DATE : 03/05/88

ORT DATA:

ATLANTA/VOLK FIELD ANGS

EXECUTIVE PARK STE. 590

ANTA. GA 30329

HY DUNCAN

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGS (85)

57 EXECUTIVE PARK STE. 590

ATLANTA, GR 30329

F REPORT COPIES: 1

TRACT / PO # : AT077

TACT

: JIMMY DUNCAN

(404)-325-0770

K: 2, UNITS: mg/L

VF.2-W1.GW1.ES VF.1-W4.GW1.ES VF.1-W5.GW1.ES VF.2-W2.GW1.ES VF.1-W1.GW1.ES VF.3/6-W1.GW1.

T COMPOUND	88030534	88030537	88030538	88030539	88030540	ES 88030541	
<u> </u>		MA	HA		MA	MR	
· f		0.004	0.020		0.019	<.005 u	
10	NA			HA			
10	HA			MA			
·A	<0.01M			0.01MB			
· f	<0.005			0.0 05			
-A	<0.001			0.0018			
-A	<0.010			<0.010			
·A	<0.010			0.038			
-A	0.02 B			0.030			
·c	<.0002			<.0002			
• A	<0.01			0.02 B			
-F	0.010			0.067			
- A	<0.06			<0.04			
-f	<9.005			<0.005			
-A	<0.10			<0.10			
-A	0.94			0.05			

REPORTING LEVELS AND MDL'S FOR METALS SAMPLES NO.: 88030536-88030541

Metal	MDL (ES) mg/L	Reporting Limits mg/L	
A1	0.1	0.2	
Sb	0.1	0.1	
Ba	0.01	0.2	
Be	0.001	0.005	
В	0.1	0.1	
Cd	0.01	0.01	
Ca	0.1	5.0	
Cr	0.01	0.05	
Co	0.01	0.05	
Cu	0.01	0.025	
Fe	0.01	0.1	
Pb	0.005	0.005	
Mg	0.1	5.0	
Mn	0.01	0.015	
Mo	0.1	0.1	
Ni	0.01	0.04	
K	1.0	5.0	
S102	0.1	0.1	
Ag	0.01	0.05	
Na	0.1	5 . 0.	
Tl	0.1	0.1	
V	0.1	0.1	
Zn	0.01	0.02	
As	0.005	0.005	
Se	0.005	0.005	
Hg	0.0002	0.0002	

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

ENGINEERING SCIENCE INC. 05/09/88

PAGE 1

ANALYSIS REPORT

UCRK GROER HUMBER: 536

JOB NOTEER : ZB0000004406

WORK ORDER DATE : 03/09/88

APPROVED BY Lab Supervisor

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGE 57 EXECUTIVE PARK STE. 590

ATLANTA, SA 30329 JIMMY DUNCAN CLIENT DATA:

ES ATLANTA/VOLK FIELD ANGE (85)

57 EXECUTIVE PARK STE. 590

ATLANTA, SA 30329

OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

CONTACT

: JIMMY DUNCAN

(404)-325-0770

TASK: 2, UNITS: mg/L

VF,12-03,601,ES VF,1-02,601,ES VF,ET-1,601,ES VF,ET-2,601,ES VF,ET-3,601,ES

TEST COMPOUND	88030545	88030566	88030567	88030548	88030569

3020	MA	NA	H A	HO	HO
P8-F	<0.005	0.005	0.033	0.025	4.085

REPORTING LEVELS AND MDL'S FOR METALS SAMPLES NO.: 88030565-88030569

Metal	MDL (ES) mg/L	Reporting Limits mg/L
Al	0.1	0.2
Sb	0.1	0.1
Ba	0.01	0.2
Be	0.001	0.005
В	0.1	0.1
Cd	0.01	0.01
Ca	0.1	5.0
Cr	0.01	0.05
Co	0.01	0.05
Cu	0.01	0.025
Fe	0.01	0.1
Pb	0,005	0.005
Mg	0.1	5.0
Mn	0.01	0.015
Мо	0,1	0.1
Ni	0.01	0.04
K	1.0	5.0
Si02	0,1	0.1
Ag	0.01	0.05
Na	0,1	5.0
Tl	0.1	0.1
v	0,1	0.1
Zn	0.01	0.02
As	0.005	0. 0 5
Se	0.005	0.005
Hg	0.0002	0.0002

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- * Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

ENGINEERING SCIENCE INC. 05/27/88

PAGE 1

ANALYSIS REPORT

WORK ORDER NUMBER: 538

JOB NUMBER

: ZB0000000400

WORK ORDER DATE : 03/10/88

REPORT DATA:

ES ATLANTA/VOLK FIELD ANGB

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

JIMMY DUNCAN

CLIENT DATA:

ES ATLANTA/VOLK FIELD ANG8 (

57 EXECUTIVE PARK STE. 590

ATLANTA, GA 30329

OF REPORT COPIES: 1

CONTRACT / PO # : ATO77

CONTACT

: JIMMY DUNCAN

(404)-325-0770

TASK: 2, UNITS: mg/L

VF,ET-5,GW1,ES VF,ET-4,GW1,ES VF,13-W1,GW1,ES VF,ET-7,GW1,ES VF,ET-6,GW1,ES

TEST COMPOUND	88030572	88030573	88030574	88030575	88030576
3020	NA	HA		NA	NA
PB-F	0.270	0.053		0.007	0.009
3010			MA		
3020			MA		
A6-A			<0.01N		
AS-F			<.005W		
BE-A			<0.001		
CD-A			<0.010		•
CR-A			<0.010		
CU-A			0.01B		
H G -C			<.0002		
NI-A			<0.010		
PB-F			<0.005		
SB-A			<0.06		
SE-F			<0.005		
TL-A			<0.10		
ZN-A			0.01B		

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- * Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

REPORTING LEVELS AND MDL'S FOR METALS SAMPLES NO.: 88030572-88030576

Metal	MDL (ES) mg/L	Reporting Limit mg/L	
Aluminum	0.1	0.2	
Antimony	0.1	0.1	
Arsenic	0.005	0.005	
Barium	0.01	0.2	
Beryllium	0.001	0.005	
Boron	0,1	0.1	
Cadmium	0.01	0.01	
Calcium	0.1	5.0	
Chromium	0.01	0.05	
Cobalt	0.01	0.05	
Copper	0.01	0.025	
Iron	0.01	0.1	
Lead	0.005	0.005	
Magnesium	0.1	5.0	
Manganese	0.01	0.015	
Mercury	0.0002	0.0002	
Molybdenum	0.1	0.1	
Nickel	0.01	0.04	
Potassium	1.0	5	
Selenium	0.005	0.005	
Silica	0.1	0.1	
Silver	0.01	0.05	
Sodium	0.1	5.0	
Thallium	0.1	0.1	
Vanadium	0.1	0.1	
Zinc	0.01	0.02	

SAMPLE PREPARATION DATA

Job No.:

AT077

Client:

ES Atlanta

Attention: Dan Lane

Address:

57 Executive Park S., NE #590

Atlanta, Ga. 30329

Project:

VOLK ANGB

The following results were reported for % moisture on Volk soil samples:

Laboratory Sample No.	% Moisture	Laboratory Sample No.	% Moisture	
88010186	3	88010218	3	
88010187	4	88010219	รั	
88010188	3	88010220	4	
88010189	6	88020289	5	
88010190	3	88020290	5	
88010191	3 2	88020291	4	
88010192	2	88020292	5	
88010193	4	88020293	5	
88010194	4	88020294	3	
88010195	3	88020295	3	
88010196	4	88020296	Ĭ	
88010197	3	88020297	1	
88010198	4	88020298	4	
88010199	2	88020299	1	
88010204	8	88020300	1	
88010205	5	88020371	1	
88010206	2	88020372	4	
88010207	5	88020373	3	
88010208	2	88020374	ž	
88010209	4	88020375	3	
88010210	4	88020376	4	
88010211	3	88020377	13	
88010212	5	88020378	3	

Laboratory		Laboratory	
Sample No.	% Moisture	Sample No.	<pre>% Moisture</pre>
88010214	4	88020383	14
88010215	3	88020384	6
88010216	6	88020385	5
88010217	9		

Detection limit = 1%

These numbers should be used to calculate dry weight values for your samples.

Inorganic Laboratory Supervisor

Revised Report 6-23-88

Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-27-88.

Laboratory		Date	Time	Date*	Date	Date*
Sample No.	Test	collected	collected	extracted	analyzed	2nd col.
99010196	410 1	4 26 22	1.405	4 20 00	0.45.00	
88010186	418.1	1-26-88	1405	1-30-88	2-17-88	
88010186	8010	1-26-88	1405		1-28-88	
88010186	8020	1-26-88	1405		1-28-88	
88010186	PCB	1-26-88	1405	1-28-88	2-29-88	
88010187	418.1	1-26-88	1210	1-30-88	2-17-88	
88010187	8010	1-26-88	1210		1-28-88	
88010187	8020	1-26-88	₹ 1210		1-28-88	
88010187	PCB	1-26-88	1210	1-28-88	2-22-88	
88010188	418.1	1-26-88	1430	1-30-88	2-17-88	
88010188	8010	1-26-88	1430		1-28-88	2-03-88
88010188	8020	1-26-88	1430		2-09-88	2-09-88
88010188	PCB	1-26-88	1430	1-28-88	2-22-88	
88010189	418.1	1-26-88	1430	1-30-88	2-17-88	
88010189	8010	1-26-88	1430		2-03-88	2-10-88
88010189	8020	1-26-88	1430		2-01-88	2-01-88
88010189	PCB	1-26-88	1430	1-28-88	2-22-88	
88010190	418.1	1-26-88	0840	1-30-88	2-17-88	
88010190	8010	1-26-88	0840		1-28-88	2-03-88
88010190	8020	1-26-88	0840		2-01-88	2-01-88
88010190	PCB	1-26-88	0840	1-28-88	2-22-88	
88010191	418.1	1-26-88	0910	1-30-88	2-17-88	
88010191	8010	1-26-88	0910		2-03-88	1-28-88
88010191	8020	1-26-88	0910		1-29-88	1-29-88
88010191	PCB	1-26-88	0910	1-28-88	2-22-88	. 23 33

Revised Report 6-23-88

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
Sample No.	1636	COLLEGICA	00110000	CACLUCTE		
88010192	418.1	1-26-88	0940	1-30-88	2-17-88	
88010192	8010	1-26-88	0940		1-28-88	2-03-88
88010192	8020	1-26-88	0940		2-01-88	2-01-88
88010192	PCB	1-26-88	0940	1-28-88	2-22-88	
88010193	418.1	1-26-88	1040	1-30-88	2-17-88	
88010193	8010	1-26-88	1040		2-09-88	
88010193	8020	1-26-88	1040		2-01-88	
88010193	PCB	1-26-88	1040	1-28-88	2-22-88	
88010194	418.1	1-26-88	1110	1-30-88	2-17-88	
88010194	8010	1-26-88	1110		2-07-88	
88010194	8020	1-26-88	1110		2-09-88	
88010194	PCB	1-26- ఎ8	1110	1-28-88	2-22-88	
88010195	418.1	1-26-88	1145	1-30-88	2-17-88	
88010195	8010	1-26-88	1145		2-07-88	
88010195	8020	1-26-88	1145		2-07-88	
88010195	PCB	1-26-88	1145	1-28-88	2-22-88	
88010196	418.1	1-26-88	1210	1-30-88	2-17-88	
88010196	8010	1-26-88	1210		2-07-88	
88010196	8020	1-26-88	1210		2-09-88	
88010196	PCB	1-26-88	1210	1-28-88	2-29-88	
88010197	418,1	1-26-88	1250	1-30-88	2-17-88	
88010197	8010	1-26-88	1250		2-07-88	
88010197	8020	1-26-88	1250		2-07-88	
88010197	PCB	1-26-88	1250	1-28-88	2-22-88	
88010198	418.1	1-26-88	1530	1-30-88	2-17-88	
88010198	8010	1-26-88	1530		2-09-88	
88010198	8020	1-26-88	1530		2-09-88	
88010198	PCB	1-26-88	1530	1-28-88	2-22-88	
88010199	418.1	1-26-88	1545	1-30-88	2-17-88	
88010199	8010	1-26-88	- 1545		2-05-88	
88010199	8020	1-26-88	1545		2-09-88	2-05-88
88010199	PCB	1-26-88	1545	1-28-88	2-22-88	

Laboratory Supervisor

^{*} If applicable

This page was intentionally left blank.

This page was intentionally left blank.

Job No.: AT077

Client: ES Atlanta

Attention: Dan Lane

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-27-88.

Sample preparation data

Laboratory		Date	Time	Date*	Date	Date*
Sample No.	Test	collected	collected	extracted	analyzed	2nd col.
88010186	SW7421	1-26-88	1405		5-10-88	
88010187	SW7421	1-26-88	1210		5-10-88	
88010188	SW7421	1-26-88	1430		5-10-88	
88010189	SW7421	1-26-88	1430		5-12-88	
88010190	SW7421	1-26-88	0840		5-10-88	
88010191	SW7421	1-26-88	0910		5-10-88	
88010192	SW7421	1-26-88	0940		5-10-88	
88010193	SW7421	1-26-88	1040		5-10-88	
88010194	SW7421	1-26-88	1110		5-10-88	
88010195	SW7421	1-26-88	1145		5-10-88	
88010196	SW7421	1-26-88	1210		5-11-88	
88010197	SW7421	1-26-88	1250		5-11-88	
88010198	SW7421	1-26-88	1530		5-11-88	
88010199	SW7421	1-26-88	1545		5-11-88	

Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-28-88.

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88010204	418.1	1-27-88	1600	1-31-88	2-17-88	
88010204	8010	1-27-88	1600		2-04-88	
88010204	8020	1-27-88	1600		2-09-88	
88010204	PCB	1-27-88	1600	1-29-88	2-23-88	
88010205	418.1	1-27-88	1310	1-31-88	2-17-88	
88010205	8010	1-27-88	1310		2-04-88	2-10-88
88010205	8020	1-27-88	1310		2-10-88	2-04-88
88010205	PCB	1-27-88	1310	1-29-88	2-23-88	
88010206	418.1	1-27-88	1335	1-31-88	2-17-88	
88010206	8010	1-27-88	1335		2-04-88	2-10-88
£8010206	8020	1-27-88	1335		2-10-88	2-04-88
88010206	PCB	1-27-88	1335	1-29-88	2-23-88	
88010207	418.1	1-27-88	1500	1-31-88	2-17-88	
88010207	8010	1-27-88	1500		2-05-88	
88010207	8020	1-27-88	1500		2-09-88	
88010207	PCB	1-27-88	1500	1-29-88	2-23-88	
88010208	418.1	1-27-88	1530	1-31-88	2-17-88	
88010208	8010	1-27-88	1530		2-05-88	
88010208	8020	1-27-88	1530		2-09-88	
88010208	PCB	1-27-88	1530	1-29-88	2-23-88	
88010209	418.1	1-27-88	1030	1-31-88	2-17-88	
88010209	8010	1-27-88	1030		2-05-88	
88010209	8020	1-27-88	1030		2-10-88	
88010209	PCB	1-27-88	1030	1-29-88	2-23-88	

Laboratory		Date	Time	Date*	Date	Date*
Sample No.	Test	collected	collected	extracted	analyzed	2nd col.
88010210	418.1	1-27-88	1130	1-31-88	2-17-88	
88010210	8010	1-27-88	1130		2-05-88	
88010210	8020	1-27-88	1130		2-10-88	
88010210	PCB	1-27-88	1130	1-29-88	2-23-88	
88010211	418.1	1-27-88	1205	1-31-88	2-17-88	
88010211	8010	1-27-88	1205		2-05-88	
88010211	8020	1-27-88	1205		2-10-88	2-10-88
88010211	PCB	1-27-88	1205	1-29-88	2-23-88	
88010212	418.1	1-27-88	1240	1-31-88	2-17-88	
88010212	8010	1-27-88	1240		2-05-88	
88010212	8020	1-27-88	1240		2-10-88	2-10-88
88010212	PCB	1-27-88	1240	1-29-88	2-23-88	

Laboratory Supervisor

Job No.: AT077

Client: ES Atlanta

Attention: Dan Lane

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-28-88.

Sample preparation data

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88010204	SW7421	1-27-88	1600		5-11-88	
88010205	SW7421	1-27-88	1310		5-11-88	
88010206	SW7421	1-27-88	1335		5-11-88	
88010207	SW7421	1-27-88	1500		5-11-88	
88010208	SW7421	1-27-88	1530		5-11-88	
88010209	SW7421	1-27-88	1030		5-11-88	
88010210	SW7421	1-27-88	1130		5-11-88	
88010211	SW7421	1-27-88	1205		5-11-88	
88010212	SW7421	1-27-88	1240		5-11-88	

Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-29-88.

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
00010011	4:0 :	1 20 00	1220	2 02 00	2 47 00	
88010214	418.1	1-28-88	1320	2-03-88	2-17-88	
88010214	8010	1-28-88	1320		2-11-88	
88010214	8020	1-28-88	1320		2-11-88	
88010214	PCB	1-28-88	1320	2-02-88	2-23-88	
88010215	418.1	1-28-88	1350	2-03-88	2-17-88	
88010215	8010	1-28-88	1350		2-11-88	
88010215	8020	1-28-88	1350		2-11-88	
88010215	PCB	1-28-88	1350	2-02-88	2-23-88	
88010216	418.1	1-28-88	1415	2-03-88	2-17-88	
88010216	8010	1-28-88	1415		2-10-88	
88010216	8020	1-28-88	1415		2-11-88	
88010216	PCB	1-28-88	1415	2-02-88	2-23-88	
88010217	418.1	1-28-88	1045	2-03-88	2-17-88	
88010217	8010	1-28-88	1045		2-11-88	
88010217	8020	1-28-88	1045		2-11-88	
88010217	PCB	1-28-88	1045	2-02-88	2-23-88	
88010218	418.1	1-28-88	1125	2-03-88	2-17-88	
88010218	8010	1-28-88	1125		2-11-88	
88010218	8020	1-28-88	1125		2-11-88	
88010218	PCB	1-28-88	1125	2-02-88	2-23-88	
88010219	418.1	1-28-88	1145	2-03-88	2-17-88	
88010219	8010	1-28-88	1145		2-11-88	
88010219	8020	1-28-88	1145		2-11-88	
88010219	PCB	1-28-88	1145	2-02-88	2-23-88	



Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88010220	418.1	1-28-88	1320	2-03-88	2-17-88	
88010220	8010	1-28-88	1320		2-11-88	
88010220	8020	1-28-88	1320		2-11-88	
88010220	PCB	1-28-88	1320	2-02-88	2-23-88	

Laboratory Supervisor

^{*} If applicable

Job No.: AT077

Client: ES Atlanta

Attention: Dan Lane

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-29-88.

Sample preparation data

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88010214	SW7421	1-28-88	1320		5-11-88	
88010215	SW7421	1-28-88	1350		5-11-88	
88010216	SW7421	1-28-88	1415		5-11-88	
88010217	SW7421	1-28-88	1045		5-12-88	
88010218	SW7421	1-28-88	1125		5-11-88	
88010219	SW7421	1-28-88	1145		5-11-88	
88010220	SW7421	1-28-88	1320		5-11-88	



Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 2-10-88.

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88020289	418.1	2-09-88	1015	2-19-88	2-27-88	
88020289	8010	2-09-88	1015		2-16-88	
88020289	8020	2-09-88	1015		2-17-88	
88020289	PCB	2-09-88	1015	2-16-88	2-27-88	
88020290	418.1	2-09-88	1015	2-19-88	2-27-88	
88020290	8010	2-09-88	1015		2-17-88	
88020290	8020	2-09-88	1015		2-17-88	
88020290	PCB	2-09-88	1015	2-16-88	2-27-88	
88020291	418.1	2-09-88	1045	2-19-88	2-27-88	
88020291	8010	2-09-88	1045		2-16-88	
88020291	8020	2-09-88	1045		2-16-88	
88020291	PCB	2-09-88	1045	2-16-88	2-27-88	
88020292	418.1	2-09-88	1125	2-19-88	2-27-88	
88020292	8010	2-09-88	1125		2-19-88	
88020292	8020	2-09-88	1125		2-19-88	
88020292	PCB	2-09-88	1125	2-16-88	2-27-88	
88020293	418.1	2-09-88	1300	2-19-88	2-27-88	
88020293	8010	2-09-88	1300	-	2-16-88	
88020293	8020	2-09-88	1300		2-16-88	
88020293	PCB	2-09-88	1300	2-16-88	2-27-88	
88020294	418.1	2-09-88	1320	2-19-88	2-27-88	
88020294	8010	2-09-88	1320		2-17-88	
88020294	8020	2-09-88	1320		2-17-88	
88020294	PCB	2-09-88	1320	2-16-88	2-27-88	

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88020295	418.1	2-09-88	1340	2-19-88	2-27-88	
88020295	8010	2-09-88	1340		2-23-88	2-19-88
88020295	8020	2-09-88	1340		2-19-88	2-17-88
88020295	PCB	2-09-88	1340	2-16-88	2-27-88	
88020296	418.1	2-09-88	1400	2-19-88	2-27-88	
88020296	8010	2-09-88	1400		2-17-88	
88020296	8020	2-09-88	1400		2-17-88	
88020296	PCB	2-09-88	1400	2-16-88	2-27-88	
88020297	418.1	2-09-88	1500	2-19-88	2-27-88	
88020297	8010	2-09-88	1500	·	2-17-88	
88020297	8020	2-09-88	1500	•	2-17-88	
88020297	PCB	2-09-88	1500	2-16-88	2-27-88	
88020298	418.1	2-09-88	1540	2-19-88	2-27-88	
88020298	8010	2-09-88	1540		2-17-88	
88020298	8020	2-09-88	1540		2-17-88	
88020298	PCB	2-09-88	1540	2-16-88	2-27-88	
88020299	418.1	2-09-88	1600	2-20-88	2-27-88	
88020299	8010	2-09-88	1600		2-17-88	
88020299	8020	2-09-88	1600		2-17-88	
88020299	PCB	2-09-88	1600	2-16-88	2-27-88	
88020300	418.1	2-09-88	1600	2-20-88	2-27-88	
88020300	8010	2-09-88	1600		2-17-88	
88020300	8020	2-09-88	1600		2-17-88	
88020300	PCB	2-09-88	1600	2-16-88	2-27-88	

Laboratory Supervisor

Job No.: AT077

Client: ES Atlanta

Attention: Dan Lane

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 2-10-88.

Laboratory Sample No.	Test	Date collected	Time collected	Date*	Date analyzed	Date* 2nd col.
		2 22 22	4045		5 44 00	
88020289	SW7421	2-09-88	1015		5-11-88	
88020290	SW7421	2-09-88	1015		5-12-88	
88020291	SW7421	2-09-88	1045		5-11-88	
88020292	SW7421	2-09-88	1125		5-11-88	
88020293	SW7421	2-09-88	1300		5-11-88	
88020294	SW7421	2-09-88	1320		5-11-88	
88020295	SW7421	2-09-88	1340		5-11-88	
88020296	SW7421	2-09-88	1400		5-11-88	
88020297	SW7421	2-09-88	1500		5-11-88	
88020298	SW7421	2-09-88	1540		5-11-88	
88020299	SW7421	2-09-88	1600		5-11-88	
88020300	SW7421	2-09-88	1600		5-11-88	

^{*} If applicable

Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 2-11-88.

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88020371	418.1	2-10-88	1330	2-20-88	2-27-88	
88020371	8010	2-10-88	1330		2-17-88	
88020371	8020	2-10-88	1330		2-17-88	
88020371	PCB	2-10-88	1330	2-23-88	2-27-88	
88020372	418.1	2-10-88	1350	2-20-88	2-27-88	
88020372	8010	2-10-88	1350		2-17-88	
88020372	8020	2-10-88	1350		2-17-88	
88020372	PCB	2-10-88	1350	2-23-88	2-27-88	
88020373	418.1	2-10-88	1500	2-20-88	2-28-88	
88020373	8010	2-10-88	1500		2-17-88	
88020373	8020	2-10-88	1500		2-17-88	
88020373	PCB	2-10-88	1500	2-23-88	2-27-88	
88020374	418.1	2-10-88	1510	2-20-88	2-28-88	
88020374	8010	2-10-88	1510		2-18-88	
88020374	8020	2-10-88	1510		2-18-88	
88020374	PCB	2-10-88	1510	2-23-88	2-27-88	
88020375	418.1	2-10-88	1000	2-20-88	2-28-88	
88020375	8010	2-10-88	1000		2-18-88	
88020375	8020	2-10-88	1000		2-18-88	
88020375	PCB	2-10-88	1000	2-23-88	2-27-88	
88020376	418.1	2-10-88	1015	2-20-88	2-28-88	
88020376	8010	2-10-88	1015		2-19-88	
88020376	8020	2-10-88	1015		2-19-88	
88020376	PCB	2-10-88	1015	2-23-88	2-27-88	



Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88020377	418.1	2-10-88	1100	2-20-88	2-28-88	
88020377	8010	2-10-88	1100		2-19-88	
88020377	8020	2-10-88	1100		2-19-88	
88020377	PCB	2-10-88	1100	2-23-88	2-27-88	
88020378	418.1	2-10-88	1230	2-20-88	2-28-88	
88020378	8010	2-10-88	1230		2-19-88	
88020378	8020	2-10-88	1230		2-19-88	
88020378	PCB	2-10-88	1230	2-23-88	2-27-88	

Laboratory Supervisor

^{*} If applicable

Job No.: AT077

Client: ES Atlanta

Attention: Dan Lane

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 2-11-88.

Sample preparation data

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
Sample No.	1000	202230184	00220000			
88020371	SW7421	2-10-88	1330		5-11-88	
88020372	SW7421	2-10-88	1350		5-11-88	
88020373	SW7421	2-10-88	1500		5-11-88	
88020374	SW7421	2-10-88	1510		5-11-88	
88020375	SW7421	2-10-88	1000		5-11-88	
88020376	SW7421	2-10-88	1015		5-11-88	
88020377	SW7421	2-10-88	1100		5-11-88	
88020378	SW7421	2-10-88	1230		5-11-88	



Job No.:

ATO77

Client:

ES Atlanta

Attention:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

Project:

Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-10-88.

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88030572	239.2	3-09-88	1130		5-06-88	
88030573	239.2	3-09-88	1030		5-06-88	
88030574	PPM	3-09-88	0800		5-05-88	
88030575	239.2	3-09-88	0900		5-06-88	
88030576	239.2	3-09-88	0930		5-06-88	

^{*} If applicable



Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-05-88.

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88030536	418.1	3-04-88	0915	3-10-88	3-18-88	
88030536	TDS	3-04-88	0915		3-10-88	
88030536	601	3-04-88	0915		3-15-88	
88030536	608	3-04-88	0915	3-08-88	3-12-88	
88030536	8020	3-04-88	0915		3-15-88	
88030537	418.1	3-04-88	1500	3-10-88	3-18-88	
88030537	TDS	3-04-88	1500		3-10-88	
88030537	601	3-04-88	1500		3-18-88	
88030537	8020	3-04-88	1500		3-18-88	3-18-88
88030537	PCB	3-04-88	1500	3-08-88	3-23-88	
88030538	418.1	3-04-88	1600	3-10-88	3-18-88	
88030538	TDS	3-04-88	1600		3-10-88	
88030538	601	3-04-88	1600		3-15-88	
88030538	8020	3-04-88	1600		3-15-88	3-12-88
88030538	PCB	3-04-88	1600	3-08-88	3-23-88	
88030539	418.1	3-04-88	1130	3-15-88	3-18-88	
88030539	TDS	3-04-88	1130		3-10-88	
88030539	601	3-04-88	1130		3-15-88	
88030539	608	3-04-88	1130	3-08-88	3-18-88	
88030539	8020	3-04-88	1130		3-15-88	
88030540	418.1	3-04-88	1545	3-15-88	3-18-88	
88030540	TDS	3-04-88	1545		3-10-88	
88030540	601	3-04-88	1545		3-15-88	
88030540	8020	3-04-88	1545		3-15-88	3-11-88
88030540	PCB	3-04-88	1545	3-08-88	3-23-88	



Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88030541	418.1	3-04-88	1400	3-15-88	3-18-88	
88030541	601	3-04-88	1400		3-17-88	
88030541	8020	3-04-88	1400		3-17-88	3-12-88
88030542	601	3-04-88	0800		3-15-88	
88030542	8020	3-04-88	0800		3-15-88	

Laboratory Supervisor

^{*} If applicable

Job No.: At077

Client: ES Atlanta

Attention: Dan Lane

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-05-88.

Sample preparation data

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88030536	PPM	3-04-88	0915			5-04-88
88030537	239.2	3-04-88	1500			5-05-88
88030538	239.2	3-04-88	1600			5-05-88
88030539	PPM	3-04-88	1130			5-04-88
88030540	239.2	3-04-88	1545			5-05-88
88030541	239.2	3-04-88	1400			5-05-88

ENGINEERING-SCIENCE, INC.

REVISED REPORT JUNE 10. 1988

Job No.: ATO77

Client: ES Atlanta Attention: Jimmy Duncan

Address: 57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329

Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-08-88.

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88030551	418.1	3-06-88	1330	3-15-88	3-18-88	
88030551	TDS	3-06-88	1330		3-10-88	
88030551	601	3-06-88	1330		3-15-88	
88030551	608	3-06-88	1330	3-10-88	3-22-88	
88030551	8020	3-06-88	1330		3-15-88	
88030552	418.1	3-07-88	1430	3-15-88	3-18-38	
88030552	TDS	3-07-88	1430		3-10-88	
88030552	601	3-07-88	1430		3-16-88	
88030552	608	3-07-88	1430	3-10-88	3-22-88	
88030552	8020	3-07-88	1430	•	3-16-88	
88030553	418.1	3-07-88	1500	3-15-88	3-18-88	
88030553	TDS	3-07-88	1500		3-10-88	
88030553	60.1	3-07-88	1500		3-16-88	
88030553	608	3-07-88	1500	3-10-88	3-22-88	
88030553	8020	3-07-88	1500		3-16-88	
88030554	418.1	3-06-88	1530	3-15-88	3-18-88	
88030554	TDS	3-06-88	1530		3-10-88	
88030554	601	3-06-88	1530		3-17-88	3-18-88
88030554	PCB	3-06-88	1530	3-10-88	3-23-88	
88030554	8020	3-06-88	1530		3-17-88	3-18-88
88030555	418.1	3-07-88	0845	3-15-88	3-18-88	
88030555	601	3-07-88	0845		3-13-88	
88030555	8020	3-07-88	0845		3-18-88	
88030556	418.1	3-07-88	1345	3-15-88	3-18-88	
88030556	TDS	3-07-88	1345		3-10-88	
88030556	601	3-07-88	1345		3-18-88	1
88030556	608	3-07-88	i 345	3-10-88	3-22-88	I
88030556	8020	3-07-88	1345		3-18-88	

This page was intentionally left blank.



88030557 418.1 3-06-88 1400 3-15-88 3-18-88 88030557 708 3-06-88 1400 3-16-88 88030557 608 3-06-88 1400 3-16-88 88030557 8020 3-06-88 1400 3-16-88 88030558 418.1 3-07-88 0930 3-16-88 88030558 601 3-07-88 0930 3-16-88 88030559 418.1 3-07-88 1015 3-16-88 88030559 418.1 3-07-88 1015 3-16-88 88030559 601 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030560 418.1 3-07-88 1100 3-16-88 88030560 8020 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1045 3-18-88 88030561 401 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 <th>Laboratory Sample No.</th> <th>Test</th> <th>Date collected</th> <th>Time collected</th> <th>Date* extracted</th> <th>Date analyzed</th> <th>Date* 2nd col.</th>	Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88030557 601 3-06-88 1400 3-10-88 3-22-88 88030557 8020 3-06-88 1400 3-10-88 3-22-88 88030557 8020 3-06-88 1400 3-16-88 88030558 418.1 3-07-88 0930 3-16-88 88030558 8020 3-07-88 0930 3-16-88 88030559 418.1 3-07-88 1015 3-16-88 88030559 601 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1100 3-16-88 3-19-88 88030560 418.1 3-07-88 1100 3-16-88 3-19-88 88030560 8020 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1045 3-18-88 88030561 418.1 3-07-88 1045 3-18-88 88030561 601 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 601 3-06-88 1100 3-16-88 3-19-88 88030562 608 3-06-88 1100 3-16-88 3-19-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030557	418.1	3-06-88	1400	3-15-88	3-18-88	
88030557 608 3-06-88 1400 3-10-88 3-22-88 88030557 8020 3-06-88 1400 3-16-88 88030558 418.1 3-07-88 0930 3-16-88 88030558 8020 3-07-88 0930 3-16-88 88030559 418.1 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030550 418.1 3-07-88 1100 3-16-88 88030560 418.1 3-07-88 1100 3-16-88 88030560 8020 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1045 3-18-88 88030561 601 3-07-88 1045 3-18-88 88030561 601 3-07-88 1045 3-18-88 88030562 TDS 3-06-88 1100 3-16-88 3-19-88 88030562 601 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030557	TDS	3-06-88	1400		3-10-88	
88030557 8020 3-06-88 1400 3-16-88 88030558 418.1 3-07-88 0930 3-16-88 88030558 8020 3-07-88 0930 3-16-88 88030559 418.1 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030560 418.1 3-07-88 1100 3-16-88 3-19-88 88030560 8020 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1045 3-18-88 88030561 601 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 601 3-06-88 1100 3-16-88 3-19-88 88030562 8020 3-06-88 1100 3-16-88 3-19-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030557	601	3-06-88	1400		3-16-88	
88030558 418.1 3-07-88 0930 3-16-88 3-19-88 88030558 8020 3-07-88 0930 3-16-88 88030559 418.1 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030560 418.1 3-07-88 1100 3-16-88 3-19-88 88030560 8020 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1045 3-18-88 88030561 601 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 601 3-06-88 1100 3-16-88 3-19-88 88030562 601 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030557	608	3-06-88	1400	3-10-88	3-22-88	
88030558 601 3-07-88 0930 3-16-88 88030558 8020 3-07-88 0930 3-16-88 88030559 418.1 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030560 418.1 3-07-88 1100 3-16-88 88030560 601 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1100 3-18-88 88030561 601 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 88030562 601 3-06-88 1100 3-16-88 88030562 608 3-06-88 1100 3-10-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-06-88 1100 3-16-88 88030563 601 3-06-88 1100	88030557	8020	3-06-88	1400		3-16-88	
88030558 8020 3-07-88 0930 3-16-88 88030559 418.1 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030560 418.1 3-07-88 1100 3-16-88 88030560 601 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 100 3-18-88 88030561 418.1 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 88030562 601 3-06-88 1100 3-16-88 88030562 601 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030558	418.1	3-07-88	0930	3-16-88	3-19-88	
88030559 418.1 3-07-88 1015 3-16-88 3-19-88 88030559 8020 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1100 3-16-88 3-19-88 88030560 418.1 3-07-88 1100 3-18-88 88030560 8020 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1045 3-18-88 88030561 601 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 501 3-06-88 1100 3-16-88 3-19-88 88030562 601 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-10-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-16-88	88030558	601	3-07-88	0930		3-16-88	
88030559 601 3-07-88 1015 3-16-88 88030559 8020 3-07-88 1015 3-16-88 88030560 418.1 3-07-88 1100 3-16-88 88030560 8020 3-07-88 1100 3-18-88 88030560 8020 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1045 3-16-88 3-19-88 88030561 601 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 TDS 3-06-88 1100 3-16-88 88030562 601 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-10-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030558	8020	3-07-88	0930		3-16-88	
88030559 8020 3-07-88 1015 3-16-88 88030560 418.1 3-07-88 1100 3-16-88 3-19-88 88030560 8020 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1045 3-18-88 88030561 601 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 TDS 3-06-88 1100 3-16-88 88030562 601 3-06-88 1100 3-16-88 88030562 608 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030559	418.1	3-07-88	1015	3-16-88	3-19-88	
88030560 418.1 3-07-88 1100 3-16-88 3-19-88 88030560 601 3-07-88 1100 3-18-88 88030560 8020 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1045 3-16-88 3-19-88 88030561 601 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 TDS 3-06-88 1100 3-16-88 88030562 601 3-06-88 1100 3-16-88 88030562 608 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-16-88	88030559	601	3-07-88	1015		3-16-88	
88030560 601 3-07-88 1100 3-18-88 88030560 8020 3-07-88 1100 3-18-88 88030561 418.1 3-07-88 1045 3-16-88 3-19-88 88030561 8020 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 TDS 3-06-88 1100 3-16-88 88030562 601 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-10-88 88030562 8020 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030559	8020	3-07-88	1015		3-16-88	
88030560 8020 3-07-88 1100 3-18-88 3-18-88 88030561 418.1 3-07-88 1045 3-16-88 3-19-88 88030561 8020 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 TDS 3-06-88 1100 3-10-88 88030562 601 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-10-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030560	418.1	3-07-88	1100	3-16-88	3-19-88	
88030560 8020 3-07-88 1100 3-18-88 3-18-88 88030561 418.1 3-07-88 1045 3-16-88 3-19-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 88030562 TDS 3-06-88 1100 3-10-88 88030562 601 3-06-88 1100 3-16-88 88030562 8020 3-06-88 1100 3-10-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030560	601	3-07-88	1100		3-18-88	
88030561 601 3-07-88 1045 3-18-88 88030561 8020 3-07-88 1045 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 TDS 3-06-88 1100 3-10-88 88030562 601 3-06-88 1100 3-16-88 88030562 608 3-06-88 1100 3-10-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030560	8020	3-07-88	1100		3-18-88	3-18-88
88030561 8020 3-07-88 1045 3-18-88 3-18-88 88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 TDS 3-06-88 1100 3-10-88 88030562 601 3-06-88 1100 3-16-88 88030562 608 3-06-88 1100 3-10-88 3-22-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030561	418.1	3-07-88	1045	3-16-88	3-19-88	
88030562 418.1 3-06-88 1100 3-16-88 3-19-88 88030562 TDS 3-06-88 1100 3-10-88 88030562 601 3-06-88 1100 3-16-88 88030562 608 3-06-88 1100 3-10-88 3-22-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030561	601	3-07-88	1045		3-18-88	
88030562 TDS 3-06-88 1100 3-10-88 88030562 601 3-06-88 1100 3-16-88 88030562 608 3-06-88 1100 3-10-88 3-22-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030561	8020	3-07-88	1045		3-18-88	3-18-88
88030562 TDS 3-06-88 1100 3-10-88 88030562 601 3-06-88 1100 3-16-88 88030562 608 3-06-88 1100 3-10-88 3-22-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88	88030562	418.1	3-06-88	1100	3-16-88	3-19-88	
88030562 601 3-06-88 1100 3-16-88 88030562 608 3-06-88 1100 3-10-88 3-22-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88		_	3-06-88	1100		3-10-88	
88030562 608 3-06-88 1100 3-10-88 3-22-88 88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88		601	3-06-88	1100		3-16-88	
88030562 8020 3-06-88 1100 3-16-88 88030563 601 3-07-88 1530 3-17-88		608	3-06-88	1100	3-10-88	3-22-88	
88030563 601 3-07-88 1530 3-17-88			3-06-88	1100		3-16-88	
			3-07-88	1530		3-17-88	
	88030563	8020	3-07-88	1530		3-17-88	

Laboratory Supervisor

^{*} If applicable



Job No.: ATO77

Client:

ES Atlanta

Attention:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

Project:

Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-08-88.

Sample Preparation Data

Laboratory Sample No.	Test	Date collected	Time collected	Date [#] extracted	Date analyzed	Date* 2nd col.
88030551	PPM	3-06-88	1330		5-05-88	
88030552	PPM	3-07-88	1430		5-05-88	
88030553	PPM	3-07-88	1500		5-05-88	
88030554	239.2	3-06-88	1530		5-04-88	
88030555	239.2	3-07-88	0845		5-04-88	
88030556	PPM	3-07-88	1345		5-05-88	
88030557	PPM	3-06-88	1400		5-05-88	
88030558	239.2	3-07-88	0930		5-04-88	
88030559	239.2	3-07-88	1015		5-04-88	
88030560	239.2	3-07-88	1100		5-04-88	
88030561	239.2	3-07-88	1045		5-04-88	
88030562	PPM	3-06-88	1100		5-05-88	

RESEARCH AND DEVELOPMENT LABORATORY 600 BANCROFT WAY BERKELEY, CALIFORNIA 94710 (415) 841-7353

Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-09-88.

Sample preparation data

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd_col.
					===/===	
88030565	418.1	3-08-88	0800	3-16-88	3-19-88	
88030565	TDS	3-08-88	0800		3-15-88	
88030565	601	3-08-88	0800		3-22-88	
88030565	8020	3-08-88	0800		3-22-88	
88030565	PCB	3-08-88	0800	3-10-88	3-23-88	
88030566	418.1	3-08-88	0930	3-16-88	3-19-88	
88030566	TDS	3-08-88	0930		3-15-88	
88030566	601	3-08-88	0930		3-18-88	3-21-88
88030566	8020	3-08-88	0930		3-18-88	3-21-88
88030566	PCB	3-08-88	0930	3-10-88	3-23-88	
88030567	418.1	3-08-88	1115	3-16-88	3-19-88	
88030567	TDS	3-08-88	1115		3-15-88	
88030567	601	3-08-88	1115		3-18-88	
88030567	8020	3-08-88	1115		3-18-88	
88030567	PCB	3-08-88	1115	3-10-88	3-23-88	
88030568	418.1	3-08-88	1345	3-17-88	3-19-88	
88030568	TDS	3-08-88	1345		3-15-88	
88030568	601	3-08-88	1345		3-18-88	
88030568	8020	3-08-88	1345		3-18-88	
88030568	PCB	3-08-88	1345	3-10-88	3-23-88	
88030569	418.1	3-08-88	1500	3-17-88	3-19-88	
88030569	TDS	3-08-88	1500		3-15-88	
88030569	601	3-08-88	1500		3-14-88	3-18-88
88030569	8020	3-08-88	1500		3-21-88	3-22-88
88030569	PCB	3-08-88	1500	3-10-88	3-23-88	
88030570	601	3-08-88	0800		3-18-88	
88030570	8020	3-08-88	0800		3-18-88	

Laboratory Supervisor

^{*} If applicable a sussiciary of the parsons corporation

RESEARCH AND DEVELOPMENT LABORATORY 600 BANCROFT WAY BERKELEY. CALIFORNIA 94710 (415) 841-7353

Job No.: At077

Client: ES Atlanta
Attention: Dan Lane

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-09-88.

Sample preparation data

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88030565	239.2	3-08-88	0800		5-06-88	
88030566	239.2	3-08-88	0930		5-06-88	
88030567	239.2	3-08-88	1115		5-06-88	
88030568	239.2	3-08-88	1345		5-06-88	
88030569	239.2	3-08-88	1500		5-06-88	

* If applicable



RESEARCH AND DEVELOPMENT LABORATORY 600 BANCROFT WAY BERKELEY, CALIFORNIA 94710 (415) 841-7353

Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-10-88.

Sample preparation data

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88030572	601	3-09-88	1130		3-18-88	3-14-88
88030572	8020	3-09-88	1130		3-22-88	3-22-88
88030572	PCB	3-09-88	1130	3-14-88	3~23-88	
88030572	418.1	3-09-88	1130	3-16-88	3-19-88	
88030572	TDS	3-09-88	1130		3-15-88	
88030573	601	3-09-88	1030		3-18-88	3-14-88
88030573	8020	3-09-88	1030		3-23-88	3-23-88
88030573	PCB	3-09-88	1030	3-14-88	3-23-88	
88030573	418.1	3-09-88	1030	3-16-88	3-19-88	
88030573	TDS	3-09-88	1030		3-15-88	
88030574	601	3-09-88	0800		3-22-88	
88030574	8020	3-09-88	0800		3-22-88	
88030574	608	3-09-88	0800.	3-14-88	3-23-88	
88030574	418.1	3-09-88	0800	3-17-88	3-19-88	
88030574	TDS	3-09-88	0800		3-15-88	
88030575	601	3-09-88	0900		3-18-88	3-22-88
88030575	8020	3-09-88	0900		3-22-88	3-22-88
88030575	PCB	3-09-88	0900	3-14-88	3-24-88	
88030575	418.1	3-09-88	0900	3-17-88	3-19-88	
88030575	TDS	3-09-88	0900		3-15-88	
88030576	601	3-09-88	0930		3-22-88	
88030576	8020	3-09-88	0930		3-22-88	
88030576	PCB	3-09-88	0930	3-14-88	3-24-88	
88030576	418.1	3-09-88	0930	3-17-88	3-19-88	
88030576	TDS	3-09-88	0930		3-15-88	
88030577	601	3-09-88	0830		3-22-88	
88030577	8020	3-09-88	0830		3-22-88	

Laboratory Supervisor

^{*} If applicable

A SUBSIDIARY OF THE PARSONS CORPORATION

600 BANCROFT WAY BERKELEY, CALIFORNIA 94710 (415) 548-7970

Job No.: ATO77

Client:

ES Atlanta

Attention:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

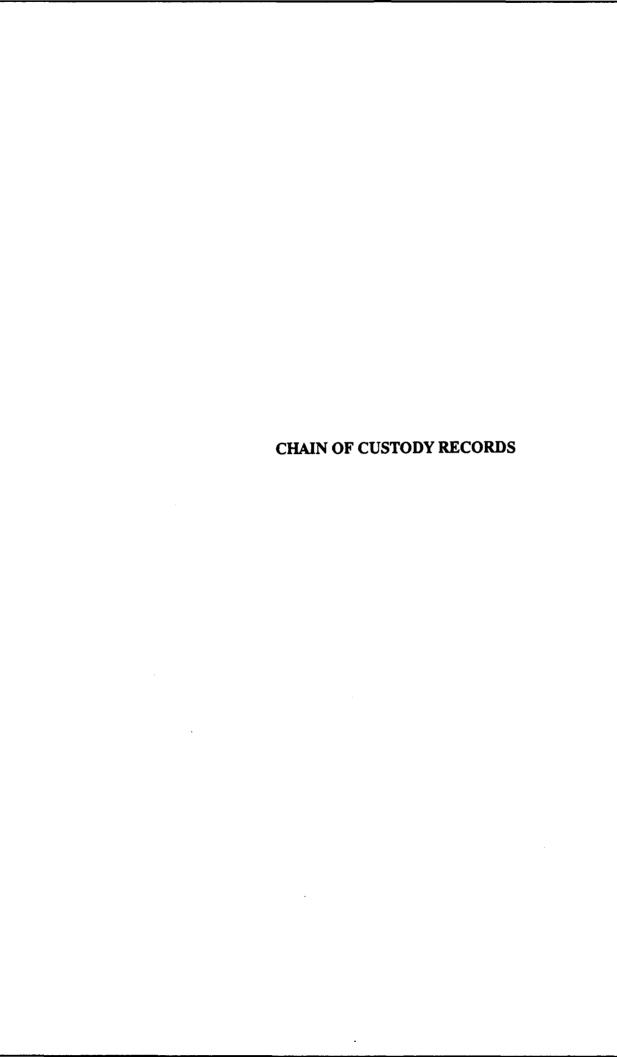
Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 7-08-88.

Sample Preparation Data

Laboratory Sample No.	Client Sample ID	Test	Date collected	Date# extracted	Date analyzed	Date# 2nd col.
88071335	VF950 GW-1 ES	601	7-07-88		7-19-88	7-18-88
88071335	VF950 GW-1 ES	8020	7-07-88		7-19-88	
88071336	Trip Blank	601	7-07-88		7-18-88	7-18-88
88071336	Trip Blank	8020	7-07-88		7-18-88	
88071337	VF934 GW-1 ES	601	7-07-88		7-18-88	7-18-88
88071337	VF934 GW-1 ES	8020	7-07-88		7-18-88	
88071338	VF916 GW-1 ES	601	7-07-88		7-18-88	7-18-88
88071338	VF916 GR-1 ES	8020	7-07-88		7-18-88	

[•] If applicable



CHAIN OF CUSTODY RECORD

467-1

								ſ
ES JOB NO.	NO.	PROJECT NAME/LOCATION	ç		ANA /	ANALYSES RE	REQUIRED SHIP TO:	
AT 077	77	VOLK FIELD ANGB, Wisconsin	Š	_				
SAMPLE	R(S): (8	SAMPLER(S): (Signature)	6	010	el p	\0\2 \2\2 \2\4	Berkeley, California 94710	
(x	ane	Rose Bonnes	CON-	8/08	3/00	8/05 8/05		
DATE) TIME	SAMPLE DESCRIPTION	TAINERS	SE MS SE MS OS MS OS MS	OE MS	SE MS OE MS OE US	REMAR	
1/26/86 1405	1405	VFI B-3 55-3,8,5'	3	2 2		7	No preservative in any	·
n 11	0141	VEI B-21 55-1 . 1.0'	н	777	7 7	7	of the bottle 880187	
וו ח	OE/H	VFI B-22 551, 0.5'	5	777	7	7	188	
" "	1430	VEI B-4 551,	5	11/	7	7	VEI B-21 55-1, 1,0 000	χ - 3
		•					hess them 1 hiter of	
								
								1
								1
								T
								1
								<u> </u>
							┢	T
Relinqui Kaj	ohod by: 1819 JA Bound	Relinquished by: (Signature) Received by: (Signature) Received by: (Signature) Received by: (Signature)	(e.ta)	Relinquished by: (Signature)	1 by: (Sig	nature)	Date/Time Received by: (Signature)	
Relingul	shed by:	Relinquished by: (Signature) Date/Time Received for Laborato	the O	1/27/K 1324m	Romarks Edm F	rte.	received colds, intact	
			Coordinate	Field Elles	-			←

467-2

AT 077	Fe Jose No.		•	_					
	11	VOLK FIELD ANGB, Wisconsin	0	<u> </u>		K:			ENGINEERING-SCIENCE
SAMPLE	ER(S): (Sign	SAMPLER(S): (Signature)	CON-	0108/08	05:05	8/:/05	0808/05		Berkeley, California 94710
DATE	TIME	SAMPLE DESCRIPTION	TAINERS	SE MS OB MS OS MS	MS	~ MS	SE MS		REMARKS
12/4	bylen a HO	VF-1 B-1 451 0.5'	2	777				2	Steperuative 88019
	016	1	70	111	/	7		, ,	880191
*	or b	55-3	B	101	1	7			880192
11	0401		9	111	7	7			880103
		1							
					\dashv				
			,						
									•
						1			
					\dashv	ᆸ			
Relinqui	wheel by	Relinquished by: (Signature) Date/Time Received by: (Signature)	inature)	Relinquished by: {Signature}	d by:	l Signat		Date/ Time	Received by: (Signature)
Relinqui	shed by		Laboratory by:	Deterting Re	4/1/6	marke	recu	end en	received colds intact
			77000) (N)//					

467-3

							-				
ES JOB NO.	NO.	PROJECT NA	PROJECT NAME/LOCATION		Š		\	ANA	ANALYSES R	REGURED / S	SHIP TO:
AT	AT 077	VOLK FI	VOLK FIELD ANGB, Wisconsin	Wisconsin	į					////	ENGINEERING-SCIENCE
SAMPL	ER(8): (1	SAMPLER(S): (Signature)			OF.		030 013	PI	0 0 2 2 2	000	Berkeley, California 94710
•	Kack Sec.	Raw Bonne	C		CON-	9/0€	05 8/01	105	8/05 8/05		
DATE	TIME		SAMPLE DESCRIPTION	PTION	TAINERS	E MS OS MS OS MS	SE MS MS MS	MS	SE MS OE MS OE		REMARKS
0111 mg/ rels	0111	VEI B	13-2 55-2	3,5	5	7 7	7	7		No are zen va	1-1
	3411	VFI	8-2 55-3	8.51	R	1///	/	1		नामुन्य	
	1210	VFI	_	1.0'	ェ	1/1	7	7		Less Han 1	1 1.14 ava. 188019
	1250		8-3 55-2	3.5'	4	1/1	7	7		Fa VF	1 B
											31088
								-			
								<u> </u>			
									_		
										-	
Relingu	lehed by	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	ture)	Relinquished by: (Signature)	hed by	: (SIg	neture)	Date/Ilme	Received by: (Signature)
700	Carl Ferring		Dulse not	•							
Relinqu	ished by	Relinquished by: (Signature)	Dete/Time	Received for Labora (Signature)	Laboratory by:	10100	- Mm	Remarks	_	this the second	1
				Bill Fred	reduce	coporti	30 W 65	<u> </u>	, כו מ י		> •
					2 2010 217	00110					

4-194

CHAIN OF CUSTODY RECORD

ES JOB NO.	. Kô.	PROJECT NAM	PROJECT NAME/LOCATION				ANALYSES	REGURBED	SHIP TO:	
ATG	AT077	VOLK FIE	VOLK FIELD ANGB, Wisconsin	Wisconsin	O		1	///	FNGINEERING-SCIENCE	
SAMPL	ER(S): (S	SAMPLER(S): (Signature)			u o	0108		0808	Berkeley, California 94710	
	1/8	Og W Bonne	4		CON-	1010	050	ノ //		T
DATE	TIME		SAMPLE DESCRIPTION	PTION	TAINERS				REMARKS	
1/26/1	1/26/m 1530	VEI B	13-4 552	3.5'	5	7 7 2	Z	N_o	presentative 8801	19.8
11 /1	1545	VEI	B-4 55 3		5	7 7	\(\frac{7}{2}\)	*	, 880199	٦
										\Box
E-5										
		•				·				
Reling	ulehed by	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	iture)	Relinquished	Relinquished by: (Signature)		Date/Time Received by: (Signature)	
7	M. Frank	ma	1/26 1745							
Rellng	dehed by	Relinquished by: (Signature)	Dete/Time	Rignature)	Laboratory by:	00.0/8/F4/	Remarks			
					7					7

Distribution: Original Accompanies Shipment, Copy to Coordinator Field Files

437.

CHAIN OF CUSTODY RECORD

			D NIIVID	COSTODI RECORD	
NUI.	JOB NO.	PROJECT :JAME/LOCATION		ANALYSES REQUIRED	SIMP TO:
IE 19	1077	VOK FOLL AUGIS WIN	Wiggs sin	1/5/0/5/0	Emplocering - Science
987	IPLEN(B):	(Blynalurgh			Do Bancout Charles
اغد	hoper Bouner	har Bouner 10 gelt		4/6/6/6	مديدور حد دراجران
DATE	16 TIME	BAMPLE DEBGRIPTION		1 AINENS (40 / 20 / 20 / 20 / 20 / 20 / 20 / 20 /	REMARKS
7	4-7/20 1600	VFI B7 553 6.5'	,	2	880204
	1				
3-53					
31					
=	Inquiated !	Reliminished by: (Bignalure) Date/Time	Reaulvad by: (8lgantura)	B) Relinquished by: (9ignature) Date/Time	ne Received by: (Signature)
	•	Jan 1/27/10 1645			
3	Reilinquilehed	hy: (Bignature) Datu/Time	Rocelved for Laboratory by:	Date/Ilma Remarks	
			(Signature)	whole was recid cold 4 intact	
			Dill Turbury	accil oval	

Distribution: Original Accompanies Shipment, Copy to Coordinator Floid Files

CHAIN OF CUSTODY RECORD

433-2

VOLK FIELD ANGB, Wisconsin No. 100		D / SHIP TO:
AMPLE DESCRIPTION 52. 3.5' 51. 0' 52. 3.5' 53. 1.5' 54. 1.5' 55. 1.5' 55. 1.5' 56. 1.5' 57. 1.5' 58.	NO.	ENGINEERING-SCIENCE
22. 35 1 2 2 3 4 3 2 3 3 4 3 3 4 3 3 4 3 4 3 4 3	0208/08	Berkeley, California 94710
\$52. 3.5 ¹ \$51. 0 ¹ \$53. 3.5	05 MS / 05 MS	REMA9KS
JF1 Bb 553 1.5' 5 4 4 4 4 4 5 4 4 4 4 4 5 UF1 B7 554 3.5' 5 4 4 4 4 4 5 UF1 B7 554 3.5' 5 4 4 4 4 5 4 5 UF1 B7 554 3.5' 6 45 6 45 6 45 6 45 6 45 6 45 6 45 6 45	~ ~ ~ ~ ~	880205
VF1 B7 SS 3.5¹ 5 √ ∨ ∨ ∨ ∨ ∨ VF1 B7 SS 3.5¹ 5 √ ∨ ∨ ∨ ∨ ∨ S √ ∨ ∨ ∨ ∨ ∨ ∨ √ S √ ∨ ∨ ∨ ∨ ∨ ∨ √ S √ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ √ S √ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨ ∨	12 1 1 1	880208
Date/Time Received by: (Signature) Part Part Part	\ \ \ \ \ \ \ \	880207
7: (Signature) Date/Time Received by: (Signature) Relinquished by: (Signature) Date/Time 7: (Signature) Date/Time Received for Laboratory by: Date/Time Remarks 9: (Signature) Date/Time (Signature)	7	880308
Dete/Time Received by: (Signature)		
Dete/Time Received by: (Signature) 1/27		
Time Received by: (Signature) Neithquished by: (Signature) Neithquished by: (Signature) Time Received for Laboratory by: (Signature) The Received for Laboratory by: (Signature) The Signature)		
Dete/Time Received by: (Signature) 1/27 645 645		
Dete/Time Received by: (Signature) 1/27 4/5 18/5		
Dete/Time Received by: (Signature) 1/27 4/5 6/45		
Dete/Time Received by: (Signature) 1/27 4/4 16.45		
Dete/Time Received by: (Signature) 1/27		
Dete/Time Received by: (Signature)		
Dete/Time Received by: (Signature) Relinquished by: (Signature) Dete/Time		
Date/Time Received for Laboratory by: Date/Time Remarks (Signature) + 30mples were reci!	Relinquished by: (Signature)	ite/Time Received by: (Signature)
(Signature) + Sumples were recit	ratory by: Date/Time Rem	000 39-86-1 711
induction Hy not signed	# 128/8 1330 +	ont/ 7-29

Distribution: Original Accompanies Shipment, Copy to Coordinator Field Files

CHAIN OF CUSTODY RECORD

433-3

ES JOB NO.	ON	PROJECT NAME/LOCATION	OCATION			ANA	ANALYSES A	BEQUIRED /	SHIP TO:	
AT 077	177	VOLK FIELD	ANGB, Wisconsin	NO.	_	-		1111	S C C C C C C C C C C C C C C C C C C C	
					\	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		///	600 Bancroft Way	
SAMPLI	ER(S): (S	SAMPLER(S): (Signature)		9	010) 		Berkeley, California 94710	
**	J. Section	NEW BONNE		CON-	/01 /0E	3/05 3/05	205 205			
DATE	TIME		SAMPLE DESCRIPTION	TAINERS	E MS MS MS MS	OE MS	SE MS/OS MS		REMARKS	-
1127/40	1127/49 1030	VF1 B-5	5510'	7	1/2	Z	-	Samole	880205	
18		VEI B.5	152,351	5	7 1 1	1 1	7	14 620		310
1/27	1205	VEI BY	55 3 10,	5	111	7	7		8802	
427	1240	VF1 B6	551 0'	ک	7 7 7	<u>2</u>	7		880212	
533										
				-						
Relinqu	Relinquished by: (Sign	nature)	Dete/Time Received by: (Signa of 16 40)	ature)	Relinquished by: (Signature)	d by: (SI	gnature)	Dete/Time	Received by: (Signature)	
Relinqu	lshed by	nature)	Date/Time Received for Laboratory by: (Signature) A.M. Tandornan #		Date/Time	Rem X	Romarks x-Sumples		were rec'd in 1051-28-88, co	Sac cons
				(22)	2	2	1 200		t Luckox	

nicitation: Atlant Arramantas Shipment, Copy to Coordinator Fleid Files

1-hEh

ES JOB NO.	NO.	PROJECT NAME/LOCATION					ANALY	SES	ANALYSES REQUIRED	SHIP TO:		
AT 077	7.7	VOLK FIELD ANGB, Wisconsin	NO.				K.			FINGINEERING-SCIENCE	-SCIENCE	
SAMPLEI	R(S): (S	SAMPLER(S): (Signature)	OF COM-		0108/01	05/0	8100	0/56/03	0805	600 Bancroll Way Berkeley, California 94710	y nia 94710	
DATE	TIME	SAMPLE DESCRIPTION	TAINERS	MS	SE MS SE MS SOS MS	SC MS	MS	SE NS		NEMAHKS &	пемлику 880214	
125/89	1320	VFI, 326, 551, 0'	7	3	7		7		Sumples	foren ma	-	7
Sapriti	1350	VF1, B9, 552, 3.5'	2	7	7	7	7		°Z	No preservatives	315	1
Si hi subrili	MK	VF1, B9, 553, 85'	5	7	,	7	7		A b	Ì	880216	
Relinquia	Inquished by: (Sign	Relinquished by: (Signature) Date/Time Received by: (Signature)	ture.	A II	Relinquished by: (Signature)	pd by:	L Sign	• tur	Date/Ilme	lime Received by: (Signature)	gneture)	
Relinqui	h p q	ature) Date/Time Received for La	C Lda 1/29/88 1045	1/22/1	Date/Time		Remarks Fec'd		cold & intact	int set		
		Shinment Cr		:								

CHAIN OF CUSTODY RECORD

7-42

L																	
	ES JOB NO.	0	PROJECT NA	CATION		9				< ;	NAL	ANALYSES	REQ	REQUIRED /	SHIP TO:		
	AT 077	77	VOLK FI	FIELD ANGB,	Wisconsin	S					1				ENGINE	ENGINEERING-SCIENCE	NCE
<u>'''</u>	SAMPLE	(S): (8	SAMPLER(S): (Signature)			ąo		-0	×0		`` ``	% !	080		Berkeley,	Berkeley, California 94710	17 10
	3366	artBa				-NOO.		200	8/01	300	>>>°	8/05					
	DATE	J TIME		SAMPLE DESCRIPTION	PTION	TAINERS	MS	E MS OF MS OF MS	05 MS / S / S / S / S / S / S / S / S / S	SAS	E MS OE MS OE MS	SE MS OE MS	SE MS		R M	пеманк ⁸ 880217	217
1	24:01 gyp2/1	24:01	VF1 38 3	,0 155		5	7	7,	1	7	7		-	Haterial sampled	ompled	foren pro	sev sake se
	128/89	57:11	VFI BP S	,58 755	,	ک	>	7	7	,	\ \			No preser	preservatives	8802	18
	S+11 14/87/1	1145	VF1 BB 5	13.8 82		5	<u>,</u>	3	7	7	7			No prese	preservatives.	880219	1.9
	- Inde	13.20	VFI B9 S	, a 155		7	>	,	7	7)			Sormyled	frozen una	Sorupled trozen unaterial a p. sservet	se vist
<u> </u>																188	0221
E-5																	
													_				
1																	
<u> </u>																	
L																	
<u> </u>																	
نــــا								\dashv	\dashv				\dashv				
							1	\dashv	_				-				
1							\dashv	\dashv	_	_	\downarrow		\dashv				
								\dashv									
	Melinqui	yd bede by	Relinquished by: (Signature)	28 430	Received by: (Signature)		Re I I	9736	Relinquished by: (Signature)	by: (20	2010	•	Date/Time		Received by: (Signature)	•
1 5	elin qui	yd bene	Reithquished by: (Signature)	Date/Time	1	itory by:	-	Date/Time	TI B.	}	Romarke fcc ¹	rec'd	1	cold + infact	fact		l E
					rame	1 32 88 10.12	<u>[</u> 2	88	hai								
	•	* * *		ING COLUCE COLOR	COC CO NOOL PERSON	THE STOREST PROPERTY.	1	•									

CHAIN OF CUSTODY RECORD

1-684

SAMPLER(S): (Signature) Rain/Rain/EL	\ \ \	
CER(S): (Signature)	5	ENGINEERING=SCIENCE 600 Bancroff Way
and House L	2808/08/08/08/08/08/08/08/08/08/08/08/08/	Berkeley, California 94710
17/14/19/00/00 17/11/19	\$05 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	
DAIR SAMPLE DESCRIPTION	15	HEMANNS GOADOA
19/69 1015 VI=1 B-10 151 0.5-1	5 7 7 7 6	B-10 551 and B-25 18802:10
V=1 B-27 151.	5 50000	were troven when sompled
VF1 B-10 352.	5 0000	
V.F.1 R-10 55 3	5 11/1/1	880202
Relinquished by: (Signature) Date/Time Received by: (Signature)	(e) Relinquished by: (Signature)	Dete/lime Received by: (Signature)
Rene Borney stilles 1205		
(Signeture)	atory by: Date/Time Hemarks cold cold (2004)	of Intact Series of Interesting 18 10, 55. 3 p.5'

E-536

CHAIN OF CUSTODY RECORD

OB 8 8 8 0 3 0 6 880308 ENGINEERING-SCIENCE נו לעיל נוצלינו 880205 Berkeley, Catifornia 94710 880294 Received by: (Signature) 489-2 600 Bancroft Way REMARKS Fritza SHIP TO: toesen rold & intret Dete/Time male Sample. ANALYSES REQUIRED Rellinquished by: (Signature) Remerke , CC , A MS 1 7 7 1 Date/Time 08:11 88/01/c 0108/0505 7 4 7 TAINERS Treducer CON-Received for Laboratory by: (Signature) Š. OF 3 3 Received by: (Signature) 4 VOLK FIELD ANGB, Wisconsin 3.5 A. C. 3,4 SAMPLE DESCRIPTION 24/48 1420 Date/Time Date/Time PROJECT NAME/LOCATION 8-17 B-11 B-11 B-11 Rever Banne Relinquished by: (Signature) Relinquished by: (Signature) 1 = 1 アア ノビン SAMPLER(S): (Signature) 1/1/ Ban Bonne 39/2 1100 TIME 2/9/89 13cm with the 04/25 13-10 ES JOB NO. AT 07.7 DATE

ES JOB NO.	NO.	PROJECT NAME/LOCATION VOLK FIELD ANGB, Wisconsin	ELLOCATION .D ANGB,	Wisconsin	NO.	N C	5	REGURED SHIP TO: ENGINEERING-SCIENCE
SAMPLE	RI S): (S	SAMPLERIS): (Signature)			o.	جو ر		
اسما	Zalez.	Raier Sonner	G		CON-	3/05/8/01/8	^/^ -	
DATE	TIME	26	SAMPLE DESCRIPTION	PTION	TAINERS	SOMS		REMARKS
1/4/20	1 4 1 15CO	V=1 B	B-12 45 2	2. 3.5'	5	777,	<u> </u>	Sample Floren when then
e Appro	CHEN PORTO	171 3	2,5		5	1 1 1 1	7	362088
अपिट	009/	VFI	551	15,	5	2 2 2 3	7	Sumple trozon when then
29hr	0091	VFI	155 Az-8	1.5"	5	2 2 2 2 2	7	Sundle horn when taken or
								88030
Relingu	lehed by	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	lure)	Relinquished by: (Signature)	Signature)	Date/ Time Received by: (Signature)
72	mich	. Same	02:91 88/14r					
Relinge	ya bene	Relinquished by: (Signature)	Date/Time	Received for Labora (Signature)	Laboratory by:	Date/Hme R	Remarks	Cold & watered
				Bill Fracture	٠,	2/10/88 11,30		
	1000					-8££ 8 1		

Distribution: Original Accompanies Shipment, Copy to Coordinator Flatd Files

CHAIN OF CUSTODY RECORD

Received by: (Signature) Berkeley, Ca 94710 600 Bancroft Way E.S. Berkeiey Lab Will ID rumber drange our REMARKS SHIP TO: cold + intact Lubds O.K Date/Time ANALYSES REQUIRED Relinquished by: (Signature) X Remarks 021 38/2/E × Date/Time TAINERS Received for Laboratory by: (Signature) CON-9 7 9 Received by: (Signature) Bull Frankan SAMPLE DESCRIPTION VF. 1-WY, GW1, ES Date/Time 3/1/88 1300 PROJECT NAME/LOCATION VOLK ANGB SAMPLERIS: ISignolure)

Mason A Mark Dhase A Dalley Relinquished by; (Signature) Relinquished by: (Signature) • 1500 TIME ES JOS NO. 3/4/88 DATE ¥ E-539

				, , , , , , , , , , , , , , , , , , , ,)				530.3	
	ES JOB NO.		PROJECT NAME/LOCATION		2		′ /	ANALYSES		лео ия ер /	SHIP TO:	
1 1 2 3 3 3 3 3 3 3 3 3 3	4107		VOLK ANGB		<u>.</u>	_		8 3/	//		E.S. Berkeley Lab	
	MPLERIE	SAMPLER(S): (Signature)			of	*** 	<u> </u>	9,	\$77	<u> </u>	600 Bancroff Way	
	Z		Mex		CON-	29 45			1/23M		Berkeley, Ca 94710	
DATE		TIME	SAMPLE DESCRIPTION	IPTION	TAINERS	\$ 20 j	809 3 917 3	8 0 2 3 8 0 9 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$0,7 \$0,0 C.5 \$6.6		HEMARKS	
34/48		1600 UF, 1-	1-415,611.	ES	5	×	X	X			880538	
<u></u>							1	1	+			
	1	-					1	#	+			
	+						1		+			T
	-						1	+	+			
	,											
E-5												
40										٠		
			•									

.,- :											•	
								_				
	+					+	1	#	$\frac{1}{1}$			
	-							\exists				
2	inquish a	Relinquished by: (Signature)	3/1/89 1800	Received by: (Signature)	lure)	Relinquished by: (Signature)	b by:	Signet	•	Dete/Time	Received by: (Signature)	2
<u> </u>	Inquieh	Relinquiched by: (Signature)	Date, TIE	(Signature) (Signature) (Signature)	tory by:	JS/88 (1:30		Romarka Vec'd	1	cold & intact	toct	

CHAIN OF CUSTODY RECORD

L														1-04 5
W	ES JOB NO.	. No	PROJECT NA	PROJECT NAME/LOCATION		,	9		/	ANA	ANALYSES		REQUIRED	SNIP TO:
	AT 077	11	VOLK FI	FIELD ANGB,		Wisconsin	į			1				ENGINEERING-SCIENCE
S	MPLEF	R S): (S	SAMPLER(S): (Signalure)				9		010	9/2	٧ ١٤٠	080	<u></u>	Berkeley, California 94710
	12	(vago	Bennen				CON-		8/01	10 5	8/05	8/0=	//	
٥	DATE			SAMPLE DESCRIPTION	SCAIPTI	NO	TAINERS	ENS OB MS OS MS	0	25/85	SE MS OE MS OE MS			REMARKS
त	2 Per 13 361	13.30	VEI 0	B-14 5	453	8.5'	x	2	7	7	7			880371
र	Alubs 1350	1350	VFI.	B-15	55 1	0.5	7	Z	7	7	3			880372
- 3	N698 1500	500	VEI	B-15 5	2 2,	3.5'	9	7	7	2	7			880373
त	2/10/518 151C	21.50	VE!]	B-15 55	2	8.5'	3	7	7	7				880374
541														
						_								
							-							
ا هٔ	Ingul	thed by:	Relinquished by: (Signature)	Date/Ilme		Received by: (Signature)	lure.	Relinquished by: (Signature)	iehed	by: (SI	gnatui]:	Date/Time	Received by: (Signature)
1	Red	6.7	Sing	2/10/86 15:	04.31									
æ	IInguli	shed by:	Relinquished by: (Signature)	Date/Time		Received for Laboratory by:	itory by:	Det	Date/Ilme	_	Hemarke	_	() / A / ()	11.6.11
					13	Bill Aurona	7 , ,	19 1/88 15 07	<i>°</i> ≺					
1								1						

Distribution: Original Accompanies Shipment, Copy to Coordinator Field Files

E-54

CHAIN OF CUSTODY RECORD

### 100 PROLICE MANTILOCATION 100 SO					CHAIN C	Jr CUS	CHAIN OF CUSTODY RECORD	JHD		7-005
## VOLK FIELD ANGB, Wisconsin NO. OF OF OF OF OF OF OF	ES JOB	NO.	PROJECT NAM	ME/LOCATION		;	_		JUIRED /	SHIP TO:
SAMPLE DESCRIPTION TAINERS TAINERS SAMPLE DESCRIPTION TAINERS SAMPLE DESCRIPTION TAINERS TAINERS SAMPLE DESCRIPTION TAINERS TAINER	AT0	77	VOLK FIE	ELD ANGB,	Wisconsin	O		1		ENGINEERING-SCIENCE
TANKERS SAMPLE DESCRIPTION TANKERS	SAMPLE	R(S): (S	Signature)			o.	0>	8/	<u> </u>	600 Bancroff Way Berkeley, California 94710
1000 VF B-13 45 3 5 5 5 5 5 5 5 5	Beck	J.R.	SOUCE			-NOO	Z/05	~0s		
100 V= B- 13 15 3 5 5 1 1 1 1 1 1 1 1		TIME	!	SAMPLE DESCR	MPTION	TAINERS	~\^\S\	MS		REMARKS
105 VE B-14 55 1.60 5 V V V V V V V V V			1 1	55		5,		\ \ \		880375
AND WE I B-M 55 1 1.C' 5 VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV	Coles	105	ı	1	٦,	5	, 2 2 1			880376
by: (Signature) Date/Time Received by: (Signature) Py: (Signature) April 923 1320 By: (Signature) April 924 1320 By: (Signature) April 925 1320 By: (Signature) April 925 1320 By: (Signature) April 925 1320 By: (Signature) April 926 1320 By: (Signature) April 927 1320 By: (Signature) April 1220 By: (Signature) By: (Signature) April 1220 By: (Signature) April 1220 By: (Signature) April 1220 By: (Signature) By: (Signature) April 1220 By: (Signature) April 1220 By: (Signature) By: (S	1/9/2	707	VE!	B-14 55	1, 100'	5	7 7	\	Sumple F	SSU.
Date/Ilme Received by: (Signature) Alte/#21320 Date/Ilme Received for Laboratory by: (Signature) Att & State Color C	10/93	70.87		3-14 25	7	5	7	i		880378
Daie/Time Received by: (Signature) Helinquished by: (Signature) Daie/Time Received for Laboratory by: Daie/Time Received for Laboratory by: Signature) Provide Colif # 1,11										
Date/Time Received by: (Signature) Helinquished by: (Signature) Date/Time Received for Laboratory by: Date/Time (Signature) Call Angles Call 4 131										
Dete/Time Received by: (Signature) Dete/Time Received for Laboratory by: Dete/Time Homarks (Signature) Received for Laboratory by: Received for Laboratory b										
Date/Time Received by: (Signature) April 22 1320 Date/Time Received for Laboratory by: (Signature) Suff Superior										
Date/Ilme Received by: (Signature) Helinquished by: (Signature) 2)10/82/1320 Date/Ilme Received for Laboratory by: (Signature) Cull Augherer 2/1/8/15:01										
Dete/Time Received by: (Signature) Ala/#5/13.20 Dete/Time Received for Laboratory by: (Signature) (Signature) (Signature) (Signature)										
Date/Time Received by: (Signature) 3)10/85/1320 Date/Time Received for Laboratory by: (Signature) (Signature) (Signature) (Signature)										
Date/Ilme Received by: (Signature) Hellnquished by: (Signature) Date/Ilme Date/Ilme Received for Laboratory by: (Signature) (Signature) (Signature)										
Detertime Received by: (Signature) Alie/85/1320 Detertime Received for Laboratory by: (Signature) (Signature) (Signature) (Signature)										
Date/Ilme Received for Leboratory by: Date/Ilme Ht (Signature)	Rellnqul	shed by	r: (Signature)	Date/Time	Received by: (Signa	(nre)	Relinquished by:	(Signature)	Dete/Ilme	
Signature) (Signature) (Signature) (Signature)	Roa	Ba		310/9%						
2/11/58/15/107	Relindul	to bede		Date/Time	Received for (Signature)	atory by:		Homarks D	1 \$ 1 ° 1 (4.	+>c+
					Bill marken		2/11/5/15/104	·	*	

Distribution: Original Accompanies Shipment, Copy to Coordinator Fluid Files

CHAIN OF CUSTODY RECORD

	•			CHAIN OF		CUSTODY RECORD	ECL	CH(5.30 .5	
W	B NO.	PROJECT NA	PROJECT NAME/LOCATION				1	ANALYSES	SES REGURRED	/ .	SHIP TO:	
AT	AT 077	VOLK	VOLK ANGB		O	_	1	100	1		E.S. Berkeley Lab	
SAMPL	ERISI: (1	Dhave A Dhult	L.		OF CON-	0 20 8 MS			STVL3M		600 Bancroft Way Berkeley, Ca 94710	
DATE	TIME		SAMPLE DESCRIPTION	IPTION	TAINERS	520 3	809 3	8 E S 3	SOL		. REMARKS	
3/4/88	/54S	VF 1-NI 6WI	1, 6WI, ES		7	×	X		7		880540	
		•		_							•	
**												
		•										
E-												
543												
	·		-									
					·							
****							+					-
	sished by	Relinguished by: (Stansture)	Date/Time	Received by: (Stansture)	ture)	Relinquished by: (Signature)		Signs	Ties and the same of the same	Dete/Time	Received by: (Signature)	T
7	ant		3/4/88 1800				•					
Reling	uished by	Relinquished by: (Signature)	Dete/Time	Received for Labora (Signature)	Laboratory by:	Dete/Time		Romarka Jec'd		cold of in	intsct	
				Bill Fraderia	ં સ	01.11 88/5K						
				1								

. 3

· ·

CHAIN OF CUSTODY RECORD

880542 MARIE · 中国 1 Received by: (Signature) Berkeley, Ca 94710 600 Bancroft Way E.S. Berkeiry Lab 880536 880539-88051 880541 880537 880538 630-6 880541 REMARKS SHIP TO recid cold & extoct Date/Time ANALYSES REQUIRED Relinquished by: (Signature) Remerks 08:11 88/5/8 Dete/Time × TAINERS CON-Received for Laboratory by: (Signature) o Z 9 7 7 7 7 Received by: (Signature) Bill Freehman SAMPLE DESCRIPTION $\widetilde{\mathbb{E}}$ ш 3/4/58 1800 3/6 - LJI 6W/ Date/Time Date/Time PROJECT NAME/LOCATION 14.6 ELL-6 1M9 5M-**VOLK ANGB** - WI GUI ₹ -7-5 Dhas. A Doluk Relinquished by: (Signature) Relinquished by: (Signature) SAMPLER(S): (Signeture) 0800 21150 1130 1545 /**6**00 08/1188/h 1/88/1500 TIME 33 AT077 ES JOB NO. A. ... 100 DATE

E-544

心技术。A 然为是

ES JOB NO.	o .	PROJECT NAME/LOCATION			`	ANALYSES		REGURED /	SHIP TO:	
<u> </u>	AT 077	VOLK ANGB	S	_		23	0		E.S. Berkeley	, Leb
ER S	1 S): 1 S	DAMPLERIS): 1 Signeture)	CON-	0 2 0 g Ms		4 7 PM	STVIBW		600 Bancroft Berkeley, Ca g	11 Way 17:0
F	TIME	SAMPLE DESCRIPTION	TAINERS	5.03	30 3	\$ 23 B 2 B 2 B 2 B 2 B 2 B 2 B 2 B 2 B 2	SQ1		REMARKS	Fa
1	16/88 1530	VF. 1-W3, GW1, ES	9	X	X		\vdash	Sall o	allor ?	880554
+-										
\dashv										
					\pm		\dashv			
4-					\pm		+			
-							1			
							-	!		
\rightarrow										
							_			
	yd bol	Melinquished by: (Signature) Dete/Time Received by: (Signature)	•	Relinquished by: (Signature)	d by:	Signe	Į į	Date/Time	Received by: (Signature)	Signature)
1	yd by:	Date/Time Received for (Signature)	Laboratory by:	Dete/Time		Remarks	le fe	100 B 100 4	Track!	

NONE FINA - SCIENCE

CHAIN OF CUSTODY RECORD

534-10 Berkeley, Ca 94710 600 Bancrott Way E.S. Berkeley Lab 880562 REMARKS SHIP TO: ANALYSES REQUIRED TAINERS CON-Š. 9F VF 12-122, GN, ES SAMPLE DESCRIPTION PROJECT NAME/LOCATION VOLK ANGB Dhave A Delex SAMPLER(S): (Signature)

36/88 1100

TIME

DATE

AT 077 ES JOB NO.

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

(4) de 1/4/88 1800

Net by: (Signeture)

Romarks 120'20 Colol & 12 descript

Dete/Time

Received for Laboratory by: (Signature)

Date/Time

3/ 1/ 1/2 /18

R. OP A LES COLLECTE

AT 077 ES JOB NO.

534 - 1/ E.S. Berkeley Leb ANALYSES REGURED CHAIN OF CUSTODY RECORD NO. PROJECT NAME/LOCATION **VOLK ANGB**

SAMPLI	SAMPLER(S): (Signature	ignature)	OF		57/ / × /	/ / 600 Bancroft Way
á	Marson	~ A Deluck	CON-	08 MS	A S S S S S S S S S S S S S S S S S S S	Berkeley, Ca 94710
DATE	TIME	SAMPLE DESCRIPTION	TAINERS	8.	\$09 3 \$09 3	REMARKS
3/9/8	0011 88/9	VEID-WY GWI ES	4	<i>></i>		880562
3/4/88	1330	3/6/88 1330 UF 2-WS 6W1, ES	4	×		880551
3/4/88	1400	16/88 1400 V F. 2 - WY, (26) ES	4	X		880557
3/6/88	3/6/88 1530	VF 1-W3 (21) ES	4	. ×		ful alor 880551
3/2/88	3/3/88 0845		4	×		Has oler 880555
	2/88 0930	٠ ا	4	×		H25020- 880558
3/2/88	3/188 1015	VF 10- W3. 6W1. ES	4			59
3/2/88	1045		4	×		H250.20- 880561
2/3/18	00//		4	\ \		H150,60 880560
3/2/88	1345	2/00/1345 - VF, 2-W3 6W1 ES	4	X		
2/3/20	198 H30	VE. 2-1 SWI E'S	4	X		880552
37/88	1530	VE H=4, 601 ES	7	 		g80563
5/1/80	1500	VE 2.2 SWI ES	4	×		H25 olor 880553
	lehed by:	quiehed by: (Signature) Date/Time Received by: (Signature)	ure)	Relinquished by: (Signature)	y: (Signature)	Date/Time Received by: (Signature)
A STATE OF THE PARTY OF THE PAR	100/	2 / 1 Must 3/3/88 1800				
	A Pour	thed by: (Signature) Date/Time Received for Laborat	sborstory by:	Date/Time	Remarks // ¿c	1. 1. 1. S.
• •	-	in the last of		1/1/10	×\$0564	Identification changed is
	لم. بر	(h,(t) = 1,2,400~	<u> </u>	10. 6 XXX/n	/3 c/	المادور والمادور والمادور والمادور

E-548

ANGER AMPLE DESCRIPTION 15.14ERS Louis 100		PBO 15 THE MANE TO SELECT				177	N VSF 9	REGIMBED	/ SHIP TO:
SAMPLE DESCRIPTION 1.5.:IERS LU, LU, E.S. SAMPLE DESCRIPTION 1.5.:IERS LU, LU, L.S. SAMPLE DESCRIPTION 1.5.:IERS LU, LU, L.S. SO ON 1.5.:IERS LU, LU, L.S. Product fruit Descriptions Des		VOLK ANGB		NO.			8		E.S. Berkeley Lab
F-S (S.L.), E.S. C-S (S.L.), E.S. Descrition Received by: (Signature) Solvantine Received by: (Signature) C-S (S.L.), E.S. Descrition (Signature) Solvantine Received by: (Signature) Descrition (Signature)		MANNERIES: 181gnaturo) Man A Dult		OF CON-	0200 MS	188	3 19	\$7 V	600 Bancroft Way Berkeley, Ca 94710
Problect Problect Describes Apple 1000 Describes 1000 Descr	TIME	SAMPLE DESCRIPT		A:NERS	520 3	009 3			REMARKS COOK P
Doio/Time Received by: (Signature) 35/by (1802) Doio/Time Received for Laboratory by: Doio/Time Remarks fecial (old in Signature)	1 1	VF ET-5 6W, E	S.	9			17	Heary	Just a dor free Hach
Dete/Time Received by: (Signature) 3/5/89 / 1400 Dete/Time Received for Leboratory by: Dete/Time Remarks fecial Cold	- 1						+	Poor A	w.A
Descritime Received by: (Signature) Ag/by (1902) Descritime Received for Laboratory by: Descritime Remarks fecial Cold						F	-	-	
Doio/Time Received by: (Signature) 3/6/89 1803 Doio/Time Received for Laboratory by: Doio/Time Remarks (2014)	ıl								
Delettime Received by: (Signature) Signature Delettime Remarks Cold	· '								
Dele/Time Received by: (Signature) 3/5/89 (1602) Dele/Time Received for Laboratory by: Dele/Time Remarks (Signature)									
Delettime Received by: (Signature) 3/6/89 1803 Delettime Received for Laboratory by: Delettime Remarks (ecid cold in Signature)									
Doio/Time Received by: (Signature) 39/89 /Box Daio/Time Received for Laboratory by: Daio/Time Remarks Fecial Cold									
Dete/Time Received by: (Signature) 3/6/69 (1805) Date/Time Received for Leboratory by: Date/Time Remarks fecial cold	. (
Delettime Received by: (Signature) 3/9/by 1800 Delettime Received for Leboratory by: Delettime Remarks fected cold									
Delettime Received by: (Signature) 3/4/by 1900 Delettime Received for Laboratory by: Delettime Remarks fected cold									
Detertime Received by: (Signature) 39/89 (1902) Detertime Received for Laboratory by: Detertime Remarks fecial cold	. 1								
Delettime Received by: (Signature) 3/9/by (1802) Delettime Received for Leboratory by: Delettime Remarks fector (cild is (Signature))									
Date/Time Received for Laboratory by: Date/Time Remarks fecial Cold	10 ->	3/9/89 (1800	leceived by: (Signatur	•	Relinquishe	d by: (Si	gnature	ļ	me Received by: (Signature)
_	1 4	Date/Time	signature)	ry by:	Dete/Tit	,	ł	Ì) .
~ {			Bill Jundan	Ų	3/10/88/12:30	સ			

CHAIN OF CUSTODY RECORD

538-2

						-					
ES JOS NO.	. NO.	PROJECT NAME/LOCATION		9		/	ANA	ANALYSES		REGURED	SHIP TO:
AT	AT 077	VOLK ANGB		Ċ	_	•		95		///	E.S. Berkeley Lab
SAMPL	ER S): (5	SAMPLER(S): (Signaturg)		9	~	_	<u>'</u>	7	sz	<u> </u>	=
d	ماميم	A Adult		CON-	MS	∕.	***	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ		Berkeley, Ca 94710
DATE	TIME	SAMPLE DESCRIPTION		TAINERS	2003	D. \	909	* CE	\$501 \$100 \$100 \$100 \$100 \$100 \$100 \$100		REMARKS
3/9/88	1030	VF. ET-4. GUI. ES	S	9	×	X	×	X		Heaver	same fred odor free-flusting
		,									~ 880573
								ļ		_	
		•									
E-											
								-		i	
							_				
						1	-				
Relings	iehed by	Relinquished by: (Signature) Date/Time	Received by: (Signature)	ure)	Relinquished by: (Signature)	9 6		- a] =	Dete/Time	A Received by: (Signature)
3	d vera										
	yd bedel	Relinquished by: (Signature) Date/Time R	Received for Laboratory by: (Signature) B. I.O. Ineduca,		3/19/88 12:50	71m•		*	Remarks rec'ol	(c) cold	of & intack
•											

										538-3
.	ES JOB NO.	PROJECT NAME/LOCATION		9		\	ANALYSES	S REGURED		SHIP TO:
	AT 077	VOLK ANGB		2			9 3,	///		E.S. Berkeley Lab
8	SAMPLER(S): (Signature)	Signature)		9	20		٠ <u>٠</u>	/ 57%	\	=
	Mari	A Dellact		CON-	MS	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			Detxelley, Ca. 247.20
DATE	TE TIME	SAMPLE DESCRIPTION		TAINERS	\$ 20 3 \(\log \)	909 3 919 3	00 3 3 10 10 10 10 10 10 10 10 10 10 10 10 10	507/20		REMARKS
3/9	3/9/88 0800	1/F 13-W1 GW1 ES	ES	7	XX	×	×			880574
E-5										
					+	$\frac{1}{2}$	\pm			
					-					
i a	Agnothed b	March 1 Jahre 3/4/89 1800	Received by: (Signature)		Relinquished by: (Signature)	ed by:	Signet		Date/Time	Received by: (Signature)
2	Inquished b	Relinquished by: (Signature) Date/Time	Received for (Signature)	by:	omitional		lemerke	Romerke recid cold		\$ intact
			and Marman	7	7.7.7.					

CHAIN OF CUSTODY RECORD

880575 Date/Time | Received by: (Signature) 638-4 Berkeley, Ca 94710 600 Bancroft Way E.S. Berkeley Lab REMARKS Romarko rec'd cold & intact SHIP TO: ANALYSES REGURED Relinquished by: (Signature) Dete/Time 3/0/81 D'E TAINERS CON-Received for Laboratory by: Š. 9 9 Bill Fredman Received by: (Signature) SAMPLE DESCRIPTION VF. ET-7. GWI ES Dean A Delet | 3/1/84 / 1800 Date/Time Dete/Time PROJECT NAME/LOCATION -and A Dall VOLK ANGB Relinquished by: (Signature) Relinquished by: (Signature) SAMPLER(5): (Signature) 3/9/00 09/0 TIME AT 077 ES JOB NO. DATE

ANOTE THE STATE OF TABLES OF TABLES ROUNDS OF TABLES OF TABLE							1					
SAMPLE DESCRIPTION TAINERS SOLOTION TAINERS TAINERS SOLOTION TAINERS TOLOTION TA	2 5	. I O	PROJECT NAME/LOCA	ATION	Q		1	Ž	LYSE	S REC	1	SHIP 10:
SAMPLE DESCRIPTION TAINERS SAMPLE DESCRIPTION TAINERS SAMPLE DESCRIPTION TAINERS WWW. W.	A	077	VOLK AND	3B	<u>.</u>		\		9 3	\	/	E.S. Berkeley Lab
AMPLE DESCRIPTION TAINERS LOVE 190 190 190 190 190 190 190 190 190 190	SAMPL	.ER(S): (§	Signeture)		5		50	\ \	~,	SZ	<u> </u>	600 Bancroft Way
SAMPLE DESCRIPTION -6, Calvi, ES -	4	has	A bluck		CON-	MS		100	>	137		
Daie/Time Received by: (Signature) These 1800 Daie/Time Received for Laboratory by: Signature) And Sure Autor. Study 8 0:20	DATE	TIME	SAMPLE	E DESCRIPTION	TAINERS	100 3		300		so.		REMARKS
Desertime Received by: (Sighature) Relinquished by: (Sighature)	3/4/88	0 930	1 1	WI ES	9	-	1	X	×			880576
Dete/Time Received by: (Signature) Relinquished by: (Signature) Relinquished by: (Signature) Resived for Laboratory by: B. 18 00 R. 10 3 100 Augusture) R. 10 3 100 Augusture)						_						
Daie/Time Received by: (Signature) A/B/B 18 Do. Daie/Time Received for Laboratory by: Cisgnature) A/A/S D. 20.												
Daie/Time Received by: (Signature) Alberta 18 color Laboratory by: Daie/Time Remarks Color Alberta Signature) Alberta Signature Signature												
DeleyTime Received by: (Signature) A/B/B 18 00 DeleyTime Received for Laboratory by: BaloyTime (Signature) A/B/B 200							_					
Dele/Time Received by: (Signature) Albe 1800 Dele/Time Received for Laboratory by: Bale/Time (Signature) A.M. Ass. Lucar, 3/1988 D. 10.												
Deta/Time Received by: (Signature) Reilinquiehed by: (Signature) Reilinquiehed by: (Signature) Reilinquiehed by: (Signature) Respective to Laboratory by: Rignature) Rignature) Rignature)												
Descritime Received by: (Signature) Relinquished by: (Signature) Descritime Received for Leboratory by: Descritime (Signature) Received for Leboratory by: Descritime (Signature) Received for Leboratory by: Received for Leboratory by: Descritime Received for Leboratory by: Descritime (Signature)												
Dele/Time Received by: (Signature) A/88 800 Dele/Time Received for Leboralory by: Baie/Time												
Dete/Time Received by: (Signature) 3/489 1800 Dete/Time Received for Laboratory by: (Signature) And Another Received for Laboratory by: (Signature)												
Detertime Received by: (Signature) Aleg 1800 Bate												
Detertime Received by: (Signature) A/88 1800 Detertime Received for Laboratory by: Detertime Remarks (et.) (All signature)												
Detertime Received by: (Signature) 3/88 1800 Detertime Received for Laboratory by: Bate/Time Received for Laboratory by: Bate/Time Remarks (et.) (Add a structure)												
Dete/Time Received by: (Signature) A/89 1800 Date/Time Received for Laboratory by: Bate/Time Remarks (et.) (dd.) B. M. A. M. A. L. L. L							-		+			
34/89 1800 Daie/Time Received for Leboratory by: Daie/Time Remarks (et') (dd 4 (Signature) B. M. A. M. Auchuan 2/488 5:20	Rollng	siehed by	1	Received by:	lure)	Relinqui	ğ.	× (S	and a	1 2	Dete/Time	Received by: (Signature)
Detertime Received for Laboratory by: Date/Time Remarks (et') cdd 4 (Signature) A. O. A. L. Lucar, 3/488 5:20	Ž	Anon		0 1800								
	Reling	yd bedely		Received for (Signature)	story by:	Date	Tlm•		norks	Ter		*
		1		Bill sheet		88/01/8	3:5					

CHAIN OF CUSTODY RECORD

Heavy Gud a dec. free flooking Popul Heavy first a dor't free Elseking maken 880575 880572 Date/Time | Received by: (Signature) Berkeley, Ca 84710 880574 600 Bancroft Way E.S. Berkeley Lab 880577 REMARKS SHIP TO: 880576 tuel odor Romarka Fecial cold & ANALYSES REGURED Relinquished by: (Signature) Dete/Time Bill mederan 3/1988 (2:2) TAINERS CON-Received for Laboratory by: (Signature) Š. 7 9 7 4 **力** Date/Time | Received by: (Signature) SAMPLE DESCRIPTION 1268 OBOO NF 13- NI, GWI, ES 19/08/0830 VF, 11- WG, GWI, ES 39/88 0900 VF, ET- 7 GWI ES VF. ET-S. GUI ES Maron A Det 3/6/80 1800 Date/Time ET-4 6WL PROJECT NAME/LOCATION ET-6, 641 **VOLK ANGB** SAMPLEM 81: 1819 molure) Chult Relinquished by: (Signature) Relinquished by: (Signature) VĒ 4/88 0930 1130 9/10 1030 TIME AT077 ES JOB NO. | KW/6/ DATE



The second secon	JO NIKUS		COSTODI NEC	nEcond	1-385	ſ
ES JOB NO.	PROJECT NAME/LOCATION			ANALYSES RE	REGURAED SHIP TO:	
AAT 077	VOLK ANGB	OZ		/ 09/	E.S. Berkeley Lab	
SAMPLER(S): (Signature)	Signature)	90 G	0500	STY JA	Berkeley, Ca 94710	
	~ A DCKWLA		1/5/	S .		T
DATE TIME	SAMPLE DESCRIPTION	TAINERS		3	REMARKS	
	VE 12-U36WIES	4	X X X	×	880565	** *
						: 1
						· .
्र होत						
W. Section 1						
1.00					1	
To Sales						
					, 4	
			-			
	by: (Signature) Date/Time Received by: (Signature)	(ure)	Relinquished by: (Signature)	y: (Signature)	Date/Time Received by: (Signature)	7.5
	Time Received for 181gnalure)	ory by:	3/9/88 / C.K	Romerke rec'd	'd cold + intent	
			1900			

CHAIN OF CUSTODY RECORD

Date/Time | Received by: (Signature) + fullyodor (Heavy 880569 Berkeley, Ca 94710 600 Bancroft Way E.S. Berkeley Lab REMARKS 880568 cold & intact 880567 SHIP TO: 880566 ANALYSES REDURED H25 Romarks rect Relinquished by: (Signature) Date/Time 3/8/88/15:15 TAINERS CON-Received for Leboratory by: (Signature) Š. 9 ત Date/Time | Received by: (Signature) Bill Friehm BAMPLE DESCRIPTION UF I-WA. GWLES VE ET-1 GWI ES VF ET-2 GLUI ES Date/Time 3/8/88 1800 PROJECT NAME/LOCATION VF ET3 6W1 ES VOLK ANGB y: (Signature) SAMPLER(S): (Signalure) 3/8/89 0930 18/88 1345 1500 34/80 1115 TIME **₹AT077** ESCIOS NO. DATE 96/8/ E-556

		,,			·		 	·-		 	 					_
2.989	REOWNED SHIP TO:	E.S. Berkeley Lab	600 Bancroff Way Berkeley, Ca 84710	REMARKS	Cal odor, Extre sande for Lab QC									Date/Time Received by: (Signature)	cold fintact	
OB I INCOME			STVI SW COO O SO O S NS	009 3										Relinquished by: (Signature)	Date Time Remarks y ec. 14	11/00 112 112 1
	:	ģ	CON-	TAINERS	9									(Signature)	ory by:	
	IE/LOCATION	VOLK ANGB	Dark	SAMPLE DESCRIPTION	1-WA 6141, ES									3/8/83 /800	Received for 1 Signature)	****a
	P.80				VE									by: (Signature)		
	ES JOB NO.	AT077	SAMPLER(S): (Signeture)	DATE TIME	3/8/88 0930	·		E-557	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				لمج <u>ج</u>	i i i i		

CHAIN OF CUSTODY RECORD

		D NICIO		מספוספון וובספוום	1		S.55-4
	NO.	PROJECT NAME/LOCATION			ا	REQUIRED SI	SHIP TO:
*AT077	777	VOLK ANGB	j Z		100		E.S. Berkeley Lab
	ERI SI: 15	SAMPLEN SI: 1 Signature)	OF CON-	0209 MS	STVL3W J		600 Bancroff Way Berkeley, Ca 94710
DATE	TIME	MPLE DESCRIPTION	TAINERS	109 3 910 3 529 3 7109 3	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		REMARKS 6.F.
3/6/88	Sill	VF, ET-1, GWI, ES	9	X X		Extra surp	sample for Lab Q1 +3 +3 + 3 +
, कर दे							
558							
			-				
•	لمر						
	3	by: (Signature) 2/8/88 1800	(c.e.)	Relinquished by: (Signeture)	: (Signature)	Del 1	Necelved by: (Signalure)
		Received for (Signature)	Laboratory by:	Dete/Time	Romarko rec'd rold	_	\$ intact
		Bill Friedman	Z.	3/3/88 15:15			

CHAIN OF CUSTODY RECORD

Received by: (Signature) B80568 Berkeley, Ca 94710 600 Bancroft Way E.S. Berkeley Lab Extro sample for Lab QC cold \$ 1.17xcf SHIP TO: Date/Time ANALYSES REQUIRED Romarka rec'd Relinquished by: (Signature) 31.51 88/6/8 Dele/Time > × X TAINERS CON-Received for Laboratory by: (Signature) . 0 9 ٥ Received by: (Signature) Bild Freedman SAMPLE DESCRIPTION ET- 2 GULES F 3/8/88 1800 Date/Time Date/Time PROJECT NAME/LOCATION **VOLK ANGB** d by: (Signature) SAMPLER(S): (Signature) Sharan A 3/8/88 1345 TIME AT 077 ES JOB NO. DATE E-559

CHAIN OF CUSTODY RECORD

-	ES JOB NO.	PROJECT NAME/LOCATION	2	7	ANALTSES HEGUIRED		SHIP 10:
<	AI 077	VOLK ANGB			/		E.S. Berkeley Lab
SAM	SAMPLER(S): (Signature)	Signature	٥	02		\ \ \	600 Bancroft Way
9	Laser	A Debut	CON-	08 MS	1986 V		Berkeley, Ca 94710
DATE	TIME	SAMPLE DESCRIPTION	TAINERS	\$ 20 3	SO / SE / 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 /		REMARKS
3/8/88	88 150U	VE JE-3 GWI ES	<i>h</i>	XX		3	9805696.
		ET _{B,c.}	•				
E-56							
50							
		by: (Signature) Doto/Time Received by: (Signature)		Reiinquishe	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
		Bate/Time Received for Labora (Signature)	Laboratory by:	29/58 15:15		id cold deuthics on with	Romaine rec'd cold & intact Sample identification absorped as per Conversation with Strong Schultz Kz

CHAIN OF CUSTODY RECORD

udor + 1426 adar Received by: (Signature) Berkeley, Ca 94710 600 Bancroft Way E.S. Berkeley Lab REMARKS 880567 880568 880566 ntsct 880570 880565 SHIP TO: Date/Time cold ANALYSES REGURED Remarks rec'd Relinquished by: (Signature) 38/8/ 15:12 Date/Time TAINERS CON-Received for Laboratory by: (Signature) Š. 9 7 3 J Received by: (Signeture) Bie Friedum 12-W3, 6W1. ES ES ES SAMPLE DESCRIPTION ΕS 13/8/80 1/800 (SW) Date/Time Dete/Time PROJECT NAME/LOCATION **VOLK ANGB** 1-05 ET-L d by: (Signature) SAMPLER(S): (Signature) 3/8/88 OBOO VE 0080 78/88 lo 930 1345 200 TIME **SAT077** ES.JOB NO. 8/88 *88*8 | 88/8/ DATE 1

APPENDIX F
QUALITY ASSURANCE REPORT

APPENDIX F QUALITY ASSURANCE REPORT

This appendix presents a summary and review of quality assurance and quality control results for laboratory analysis of water, sediment, and soil samples collected as part of the field program for the Remedial Investigation at Volk Field, Wisconsin. The analyses were performed by ES Research and Development Laboratories in Berkeley, California.

The documentation reporting results of analyses for environmental, laboratory quality control, field duplicate, trip blank, and equipment rinsate samples were reviewed to assess the completeness, representativeness, precision and accuracy of the analytical results. The completeness of the analysis was determined by comparison of tests requested versus analyses results obtained; these data are shown as collection and analyses dates for each sample and test in Tables F.1 and F.2. Representativeness was evaluated from the analysis results obtained for trip blanks, field blanks, bailer rinsate blanks and coded field duplicate samples; these data are presented in Tables F.3, F.4 and F.5. Precision and accuracy were assessed by comparison of duplicate analyses results and spiked sample percentage recoveries respectively; these data are presented in the Attachment following Table F.5.

F.1 HOLDING TIMES

Holding times were met for all analyses on groundwater, surface water, and soil samples. Dates of collection, extraction and analysis for all water samples are presented in Table F.1. Those for soil samples are presented in Table F.2. In both tables, the holding time in days from collection is given in parentheses after the extraction or analysis date, except for the analysis of PCBs and semi-volatile organics. For these analyses, the holding time begins with the date of extraction, as required by the methods.

F.2 COMPLETENESS

All analyses were completed with valid data. The report exceeds the completeness criteria of 90 percent.

F.3 FIELD QUALITY CONTROL SAMPLES

Field quality control samples consisted of trip blanks, bailer rinsate blanks, field blanks and coded field duplicates. Trip blanks are samples of laboratory-pure water shipped with the sampling containers, and are not opened once sealed by the laboratory. They serve to detect potential sample contamination during shipment, handling and storage of samples between collection and analysis. One trip blank accompanies each container of samples for volatiles analysis. No analytes were detected in any of the trip blanks. These data are presented in Table F.3.

During the course of sampling for water samples, three bailer rinsate samples were collected. The only analytes detected were copper (in one sample), lead (one sample) and zinc (two samples). The copper and one of the zinc analyses showed concentrations near the detection limits. The bailer rinsate from March 3, 1988, however, indicated that very small amounts of lead (7 ug/L) and zinc (10 ug/L) could have been introduced into the environmental samples during collection. Therefore, analysis results for lead and zinc collected between March 3 and March 6 should be noted as possible contamination or as estimated values unless the sample concentrations exceed those found in the rinsate blank by a factor of 5. These data are presented in Table F.3.

One field (source water) blank was collected. This sample also showed very low concentrations of both copper and zinc. These levels, however, are below the quantifiable range and are therefore indicated as "trace" with an estimated quantity. These data are presented in Table F.3.

Coded field duplicate samples were collected for both soil samples and groundwater and surface water samples. Both the actual and the coded sample identifiers and the analysis results of both the coded and correctly identified samples, along with the mean and the relative percent difference (RPD) are presented in Table F.4 (soil samples) and Table F.5 (water samples).

For soil samples the analyses indicate that the sample collection was representative. While the numerical values of the RPD of some of the purgeable halocarbons and of the aromatic volatile organics were somewhat large, analytes present in one duplicate were also present in the other; those absent in one were absent in the others. Given the heterogenous nature of soil and the volatility of the compounds, the data for soil samples should be considered representative.

For the water samples, the numerical values of the RPD (where calculated) were much smaller than those found for soil samples. One groundwater sample, however, showed both naphthalene and bis(2-ethylhexyl)phthalate which were absent in the coded duplicate. Toluene was detected in another groundwater sample while being absent from the duplicate sample. All are present below 10 ug/L, however, so these levels are not considered significant. Analysis results of the water samples should, therefore, be considered representative of the groundwater and surface waters at Volk Field, except for the caveat on zinc and lead noted above.

F.4 LABORATORY QUALITY CONTROL DATA

Laboratory Quality Control Data consist of the results obtained from the analysis of laboratory blanks, laboratory control samples, surrogate spikes, spiked samples, and laboratory duplicate samples. Laboratory blank analysis results should be less than the detection limit for all analytes.

A laboratory control sample is a sample of known concentration that is analyzed as an additional sample of the sample set. The PR of these samples indicates whether the analysis system is in control. The use of laboratory control samples is standard ES laboratory policy. The results of these samples for PCBs are included and indicate the analytical system was within the control limits dictated by EPA guidelines.

Surrogate spike compounds are analytes added to each sample at a known concentration. The recovery of these compounds may be determined and indicate whether the matrix of the sample is affecting the analytical results. The use of surrogate spikes is required for some methods but only recommended for other in the published EPA methodology. The results of these surrogate spikes are presented in the Attachment. The data indicate that the analysis systems for PCBs, volatile organic compounds, and semi-volatile organic compounds were within control as specified by EPA guidelines.

F.4.1 Metals Analyses Criteria

A relative percentage difference (RPD) of less than 20 percent is normally used as a guide for assessment of precision for duplicate analyses on samples containing analyte at concentrations greater than five times the method detection limit. The uncertainty of quantitation increases greatly at lower concentrations.

Thus, the analyte concentration was considered in addition to the RPD value for determination of the acceptability of analytical precision for a test. The heterogeneous nature of soil and sediment samples also must be considered in evaluation of precision.

Accuracy of analytical results is measured as the percentage recovery (PR) of a laboratory sample spike. For analyte concentrations within the quantitation range, a PR between 80 and 120 percent is generally considered acceptable. Larger deviations from 100 percent should be expected for samples for which the unspiked analysis result is near or below the quantitation limit. Heterogeneity of soil and sediment samples also affects the PR. Thus, the sample type and ambient analyte concentration were considered in addition to the PR in determining the acceptability of analytical accuracy for a test.

F.4.2 Organic Analyses Criteria

For organic methods of analysis, each method specifies the precision and recovery criteria required for that method. The limitations are again set at five times the method detection limit, unless the method specifies otherwise.

F.4.3 Labortory Results

In all cases, laboratory blank analysis results were below required detection limits. In some cases, RPD or PR criteria were not met for some samples, but other laboratory data (laboratory control sample analysis) indicated that the analysis system was in control. This is an indication of a matrix and not a laboratory problem which does not invalidate the analysis results. Whenever this occurred, an explanation was given in the accompanying Case Narrative, or on the QC report. In all cases, the data presented indicate that the data are acceptable. All laboratory quality control data are presented in the Attachment.

TABLE F.1 SOUMART OF BOLDING TIMES FOR GROUND WATER SAMPLES

AMPLE IDENTIFIES	DATE	PORGRABLE BALOCARBORS SN8010/E601	AROMATIC FOLATILE ORGANICS SW8020/E692	TOTAL DISSOLVED SOLIDS E160.1	PETROLEON STOROCARBORS E418.1	ORGANOCE PESTIC AND PO SW8080/	IDES B'S	SEMI-VO ORGAN E62	ICS	LEAD AMALYSIS (E239.2)
		(14 DAYS)	(14 DATS)	(7 DATS)	(28 DAYS)	(7 DATS) EXTRACTED	(40 DAYS) AMALTZED	(7 DAYS) EXTRACTED	(40 DATS) AMALTZED	(180 DATS)
IRE TRAIRING AREA -	SITE 1									
77-1-W1-GW1-BS	3-4-88	3-15-88(11)	3-15-88(11)	3-10-88(6)	3-18-88(14)	3-8-88(4)	3-23-88(15)	3-7-88(3)	3-17-88(10)	5-5-88(62)
77-1-42-641-ES	3-8-88	3-18-88(10)	3-18-88(10)	3-15-88(7)	3-19-88(11)	3-10-88(2)	3-23-88(13)	3-12-88(4)	4-8-88(27)	5-6-88(59)
77-1-N3-GN1-ES	3-6-88	3-17-88(11)	3-17-88(11)	3-10-88(4)	3-18-88(12)	3-10-88(4)	3-23-88(13)	3-11-88(5)	4-11-88(31)	5-4-88(59)
FF-1-44-GW1-ES	3-4-88	3-18-88(14)	3-18-88(14)	3-10-88(6)	3-18-88(14)	3-8-88(4)	3-23-88(15)	3-7-88(3)	3-18-88(11)	5-5-88(62)
FF-1-W5-GW1-ES (a)	3-4-88	3-15-88(11)	3-15-88(11)	3-10-88(6)	3-18-88(14)	3-8-88(4)	3-23-88(15)	3-7-88(3)	3-18-88(11)	5-5-88(62)
11-1-271-GN1-85	3-8-88	3-18-68(10)	3-18-88(10)	3-15-88(7)	J-19-88(11)	3-10-88(2)	3-23-88(13)	3-12-88(4)	4-12-88(31)	5-6-88(59)
77-1-672-381-6S	3-8-88	3-18-88(10)	3-18-88(10)	3-15-88(7)	3-19-88(11)	3-10-88(2)	3-23-88(13)	3-14-88(6)	4-12-88(29)	5-5-88(59)
FF-1-873-GW1-65	3-8-88	3-14-68(6)	3-21-88(13)	3-15-88(7)	3-19-88(11)	3-10-88(2)	3-23-88(13)	3-12-58(4)	4-13-88(32)	5-5-88(59)
17-1-114-GH1-ES	3-9-88	3-18-88(9)	3-23-88(14)	3-15-88(6)	3-19-88(10)	3-14-88(5)	3-23-88(9)	3-14-88(5)	4-13-88(30)	5-6-88(58)
77-1-175-GW1-15	3-9-88	3-18-88(9)	3-22-88(13)	3-15-88(6)	3-19-88(10)	3-14-88(5)	3-23-88(9)	3-14-88(5)	4-13-88(30)	5-6-88(58)
77-1-876-GW1-8S	3-9-88	3-22-88(13)	3-22-88(13)	3-15-88(6)	3-19-88(10)	3-14-88(5)	3-24-88(10)	3-14-88(5)	4-14-88(31)	5-6-88(58)
77-1-877-GW1-85	3-9-88	3-18-88(9)	3-22-88(13)	3-15-88(6)	3-19-88(10)	3-14-88(5)	3-24-88(10)	3-14-88(5)	4-14-88(31)	5-6-88(58)

⁽a) - This sample was a coded field duplicate of the sample listed above it in this table.

TABLE F.2 SUMMARY OF ROLDING TIMES FOR SOIL SAMPLES

SAUPLE LOCUTIFIER	DATE SAMPLED	PURGRABLE RALOCARBORS (SM8010)	APONATIC TOLATILE ORGANICS (SH8828)	PETROLEGI ETDROCARBORS (E416.1)	PEST) AND	CELORIUS (CIDES PCB'S 1888)	SEM 1-701 ORGAI (E6:	ICS	LIAD ABALYSIS (SUT421)
		(14 DATS)	(14 DATS)	(28 DATS)	(14 DATS)	(40 DATS)	(14 DATS) EXTRACTED	(46 DATS)	(180 DAYS)
THE TRAINING AREA									
771-81-551-0.5	1-28-88	1-28-88(2)	2-1-88(8)	2-17-88(22)	1-28-88(2)	2-22-88(25)	2-1-88(6)	2-12-80(11)	5-10-08(105)
771-81-5 52- 3.5	1-26-88	2-3-48(8)	1-29-48(3)	2-17-88(22)	1-28-68(2)	2-22-86(25)	2-1-88(6)	2-12-86(11)	5-18-88(185)
771-81-553-8.5	1-26-48	1-28-88(2)	2-1-88(6)	2-17-88(22)	1-28-88(2)	2-22-80(25)	2-1-86(6)	2-12-80(11)	5-10-88(105)
771- 32- 551-0.5	! - 26 - 68	2-9-88(14)	2-1-88(6)	2-17-88(22)	1-28-88(2)	2-22-88(25)	2-1-88(6)	2-9-88(8)	5-10-88(105)
1F1-32-552-3.5	1-26-88	2-7-68(12)	2-9-68(14)	2-17-88(22)	1-28-88(2)	2-22-88(25)	2-1-88(\$)	2-9-88(8)	5-19-88(105)
171-82-553-8.5	1-26-68	2-7-88(12)	2-7-68(12)	2-17-88(22)	1-26-88(2)	2-22-88(25)	2-1-88(6)	2-9-88(8)	5-10-88(105)
171-83-551-1.0	1-26-88	2-7-88(12)	2-9-88(14)	2-17-88(22)	1-28-80(2)	2-29-68(32)	2-1-88(6)	2-9-88(8)	5-11-08(106)
		1-28-88(2)	1-28-88(2)	2-17-88(22)	1-28-88(2)	2-22-88(25)	2-1-88(6)	2-8-88(7)	5-10-08(105)
171-83-552-3.5	1-26-88	2-7-88(12)	2-9-88(14)	2-17-88(22)	1-28-88(2)	2-22-88(25)	2-1-88(6)	2-9-88(8)	5-11-08(106)
171-83-553-8.5	1-26-88	1-28-48(2)	1-28-48(2)	2-17-88(22)	1-28-88(2)	2-29-88(32)	2-1-68(6)	2-8-88(7)	5-10-88(105)
171-84-551-0.5	1-26-48	2-3-88(8)	2-1-86(6)	2-17-88(22)	1-28-68(2)	2-22-88(25)	2-1-68(6)	2-16-88(15)	5-12-88(107)
PI-822-551-0.5 (a)		1-28-88(2)	2-9-88(14)	2-17-48(22)	1-28-88(2)	2-22-88(25)	2-1-88(8)	2-16-88(15)	5-10-88(105)
171-84-552-3.5	1-26-88	2-9-84(14)	2-9-88 (14)	2-17-88(22)	1-28-88(2)	2-22-88(25)	2-1-88(6)	2-9-88(8)	5-11-88(196)
771-84-553-8.5	1-26-68	2-5-48(10)	2-9-48(14)	2-17-88(22)	1-28-88(2)	2-22-88(25)	2-1-48(6)	2-12-88(11)	5-11-88(106)
TP1-85-551-0	1-27-88	2-5-88(9)	2-10-80(14)	2-17-88(21)	1-29-88(2)	2-23-68(25)	2-2-88(8)	2-22-86(20)	5-11-88(105)
771-85-552-3.5	1-27-88	2-5-88(9)	2-19-68(14)	2-17-88(21)	1-29-88(2)	2-23-68(25)	2-2-88(6)	2-23-88(21)	5-11-88(105)
771-35-553-10	1-27-88	2-5-48(9)	2-10-68(14)	2-17-88(21)	1-29-88(2)	2-23-88(25)	2-2-88(6)	2-23-88(21)	5-11-48(105)
771-86-551-0	1-27-88	2-5-48(9)	2-18-88(14)	2-17-88(21)	1-29-88(2)	2-23-88(25)	2-2-88(6)	2-23-88(21)	5-11-88(105)
7 71-86-552- 3.5	1-27-88	2-4-88(8)	2-10-88(14)	2-17-88(21)	1-29-88(2)	2-23-88(25)	2-2-88(8)	2-23-68(21)	5-11-88(195)
771-86-553-6.5	1-27-88	2-4-88(8)	2-10-68(14)	2-17-88(21)	1-29-88(2)	2-23-48(25)	2-2-68(6)	2-22-68(20)	5-11-88(105)
781-87-551-8	1-27-88	2-5-88(9)	2-9-88(13)	2-17-48(21)	1-29-48(2)	2-23-88(25)	2-2-88(6)	2-22-88(20)	5-11-80(105)
171-87-582-3.5	1-27-88	2-5-88(9)	2-9-88(13)	2-17-88(21)	1-29-48(2)	2-23-88(25)	2-2-88(6)	2-22-88(20)	5-11-88(105)
TF1-87-553-8.5	1-27-88	2-4-88(8)	2-9-66(13)	2-17-68(21)	1-29-46(2)	2-23-66(25)	2-2-66(6)	2-19-68(17)	5-11-00(105
771-88-551-0	1-28-88	2-11-88(14)	2-11-88(14)	2-17-88(20)	2-2-88(5)	2-23-88(21)	2-2-88(5)	3-1-88(27)	5-11-88(104)
771-88-552-J.5	1-28-88	2-11-48(14)	2-11-48(14)	2-17-88(20)	2-2-88(5)	2-23-48(21)	2-2-88(5)	3-1-68(27)	5-11-88(104)
771-88-553-8.5	L-28-88	2-11-88(14)	2-11-46(14)	2-17-88(20)	2-2-88(5)	2-23-88(21)	2-2-88(5)	3-1-88(27)	5-11-88(104)
771-89-551-0	1-28-88	2-11-88(14)	2-11-48(14)	2-17-88(20)	2-2-88(5)	2-23-88(21)	2-2-88(5)	3-1-88(27)	5-11-00(104)
TF1-826-551-0 (a)	1-28-88	2-11-88(14)	2-11-88(16)	2-17-88(20)	2-2-88(5)	2-23-88(21)	2-2-88(5)	3-1-88(21)	5-11-88(104)
171-89-552-3.5	1-28-88	2-11-88(14)	2-11-00(14)	2-17-88(28)	2-2-88(5)	2-23-88(21)	2-2-88(5)	3-1-88(27)	5-11-08(104)
171-89-553-8.5	1-28-88	2-10-88(13)	2-11-08(14)	2-17-88(28)	2-2-88(5)	2-23-88(21)	2-2-48(5)	3-1-88(27)	5-11-68(104)
791-810-551-0.5	2-1-88	2-16-88(7)	2-17-88(8)	2-27-80(18)	2-16-88(7)	2-27-88(11)	2-17-88(8)	3-6-68(20)	5-11-88(92)
F1-827-551-0.5 (a)	2-9-88	2-17-88(8)	2-17-88(8)	2-27-68(18)	2-16-88(7)	2-27-48(11)	2-17-48(8)	3-8-86(20)	5-12-88(93)
171-810-552-3.5 ·		2-16-48(7)	2-16-48(7)	2-27-40(18)	2-16-48(1)	2-27-88(11)	2-17-88(8)	3-9-88(21)	5-11-88(92)
TF1-818-553-6.5	2-9-88	2-19-88(10)	2-19-48(19)	2-27-88(18)	2-16-88(T)	2-27-88(11)	2-17-88(8)	3-9-88(21)	5-11-66(92)
TF1-811-551-1.0	2-9-88	2-16-88(7)	2-16-88(7)	2-27-88(18)	2-16-68(7)	2-27-88(11)	2-17-88(8)	3-10-88(22)	5-11-88(92)
TT1-811-552-3.5	2-9-48	2-17-88(8)	2-17-88(8)	2-27-48(18)	2-16-88(7)	2-27-88(11)	2-17-68(8)	3-10-68(22)	5-11-08(92)
VF1-811-553-4.5	2-9-88	2-23-68(14)	2-19-68(16)	2-27-88(18)	2-16-88(7)	2-27-88(11)	2-17-88(8)	3-10-88(22)	5-11-86(92)
771-B12-SS1-1.0	2-9-48	2-17-48(8)	2-17-88(8)	2-27-88(18)	2-16-66(7)	2-27-48(11)	2-17-88(8)	3-10-88(22)	5-11-88(92)
FF1-B12-552-3.5	2-9-48	2-17-88(8)	2-17-48(8)	2-27-48(18)	2-18-88(7)	2-27-48(11)	2-17-88(8)	3-10-88(22)	5-11-88(92)
7F1-812-SSJ-4.5	2-9-48	2-17-88(8)	2-17-88(8)	2-27-86(18)	2-16-88(7)	2-27-88(11)	2-17-88(8)	3-10-88(22)	5-11-88(92)
771-813-551-1.5	2-9-48	2-17-88(8)	2-17-88(8)	2-27-48(18)	2-16-88(7)	2-27-46(11)	2-17-68(8)	3-11-88(23)	5-11-88(92)
F1-828-SS1-1.5 (a)		2-17-88(8)	2-17-88(8)	2-27-48(18)	2-16-88(7)	2-27-88(11)	2-17-88(8)	3-11-88(23)	5-11-88(92)
771-813-552-3.5	2-18-88	2-18-48(8)	2-18-88(8)	2-28-88(18)	2-23-46(13)	2-27-68(4)	2-21-66(11)	3-15-88(23)	5-11-88(91)
171-813-553-8.5	2-19-88	2-19-48(9)	2-19-48(9)	2-28-88(18)	2-23-48(13)	2-27-88(4)	2-21-60(11)	3-15-68(23)	5-11-88(91)
771-814-SS1-1.0	2-10-44	2-19-08(9)	2-19-88(9)	2-28-88(18)	2-23-88(13)	2-27-88(4)	2-21-60(11)	3-15-88(23)	5-11-88(91)
171-814-552-3.5	2-10-80	2-19-48(9)	2-19-48(9)	2-28-88(18)	2-23-48(13)	2-27-48(4)	2-21-68(11)	3-15-88(23)	5-11-88(91)
171-814-553-8.5	2-10-44	2-17-88(1)	2-17-80(7)	2-27-88(17)	2-23-48(13)	2-27-08(4)	2-21-88(11)	3-14-40(22)	5-11-88(91)
771-815-551-0.5	2-19-88	2-17-86(7)	2-17-88(7)	2-27-88(17)	2-23-88(13)	2-27-68(4)	2-21-88(11)	3-15-88(23)	5-11-88(91)
771-815-582-3.5	2-18-88	2-17-88(7)	2-17-88(7)	2-28-88(18)	2-23-48(13)	2-27-68(4)	2-21-80(11)	3-15-88(23)	5-11-88(91)
	2-19-44	2-18-66(8) -	2-18-65(6)	2-28-66(16)	2-23-66(13)	2-27-48(4)	2-21-46(11)	3-15-48(23)	5-11-88(81)

⁽a) - This sample was a coded field deplicate of the sample listed above it in this table.

TABLE F.3
TOLE FIELD ARGS
SUBMARY OF CREMICAL ANALYSES FOR
TRIP SLANES, DAILER RIBSATE AND FIRED BLANES

SAUPLE IDENTIFIES	DATE	PURGEABLE RALOCARBORS SEGI(ug/L)	ABONATIC TOLATILE ORGANICS SN8828(eg/L)	PETROLEUM BYDROCARBONS E416.1(ag/L)	TOTAL DISSOLTED SOLIDS - 1160.1 (mg/L)	PCB's SN8080/1608 (ag/L)	BASE/MEUTRALS ACID EXTRACTABLES E625(ag/L)		#3010/200.7 .2, 239.2, 0 - {#g/L}
		lesaits	leselts	lesulta	lesuits	lesults	fesuits	ELEMENT	lessits
TRIP BLUES									
77-11-81-GW1-85	03/02/08	10	n	14	114	14	TA .	***	74
FF-11-W2-GW1-ES	83/83/88	19	10	RA	74	NA.	14	•••	14
21-112-61-13-77	83/84/88	10	1)	86	TÅ.	11	14	•••	u
77-11-84-6H1-8S	03/07/88	13	20	#1	FA.	11	114	•••	11
17-11-85-681- 15	83/08/88	10	10	114	114	114	FA.	•	RA.
7F-11-46-GH1-8S	93/09/88	10	1)	RÅ	RA	14	11	***	14
BAILER BIRSATE									
77-12-41-681- is	03/63/88	10	19	RD	1D	19	10	Ce Pb In	0.018 0.007 0.03
77-12-12-GH1-85	03/06/88	n	11)	10	ă)	19	10	Za	0.018
77-12-43-GH1-ES	03/08/88	1)	19	10	10	D	10	Pb	10
FIELD BLANES									
77-13-W1-GW1-ES	03/09/88	1D	10	AD	10	10	10	Ca In	0.01B 0.01B

ND - Not Detected
DL - Detection limit
S - Reported value is less than Reporting limit but greater than the EDL.
NA - Not Applicable

TABLE F.4
SUMMARY OF RESULTS FOR CODED
FIELD DOPLICATES OF SOIL SAMPLES

IDENTIFIER ROUSER ONE (ACTUAL SAMPLE ID)	IDENTIFIER MUMBER TWO	UNITS	RESULT ORE		RESULT	AVERAGE	RELATIVE PERCENT DIFFERENCE RPD
PERCEABLE HALOCARBORS (S	548010)						
FF1-B3-S51-1.0	7F1-B21-SS1-1.0	ag/lg	ID .		#D	RC	BC BC
771-84-SS1-0.5	VF1-B22-SS1-0.5	ug/Lg	TRIRACELORORINILEN	E 0.53	TETRACELOROETETLENE G.7	3 0.63	31.8
			TRICELORORTHENE	8.0	TRICELOROUTERNE 41	24.5	134.7
771-89-SS1-0	771-826-SS1-0	28/18	10		ЯD	RC	BC BC
FF1-B10-SS1-0.5	771-B27-SS1-0.5	ug/lg	80		ED	#C	BC
VF1-B13-S51-1.5	VF1-B28-SS1-1.5	us/Le	10		ID	#C	RC
ROMATIC TOLATILE ORGANI	INC (CHANNA)						
***1-83-551-1.0	TF1-B21-SS1-1.0	ug/lg	80		ND	KC	1C
	7F1-B22-SS1-0.5		BERIERE	2,000	BENIENE 17		168.7
771-B4-SS1-0.5	11-822-331-4.3	ag/lg	ETHTLBENZENE	4,800	STRYLBERZERS 1.1		125.4
				2,500	TOLUERE 1.0		85.7
			1010181			000 12,400	41.9
991 DA CE: A	491 pge cc1 A	17 -	ITLENES Ad	9,800	AILLEED 15,	12,400 #C	AC.
9F1-89-551-0	YF1-B26-SS1-0	ug/lg	#V 10		1D	RC	NC
771-810-SS1-0.5	VV1-B27-SS1-0.5	ag/lg			ED	NC	EC EC
7F1-B13-SS1-1.5	TF1-828-SS1-1.5	ug/Lg	#D		av	at.	50
PETROLEUM SYDROCARBORS	(\$418.1)						
781-83-SS1-1.0	771-B21-SS1-1.0	ng/Ig	260		130	195	66.7
YF1-84-551-0.5	771-822-SS1-0.5	sg/kg	11,000		11,000	11,000	0
7F1-89-551-6	VF1-826-SS1-0	ng/le	<100		<100	AC .	RC
TF1-810-551-0.5	VT1-B27-SS1-0.5	16/16	570		750	660	27.3
FF1-B13-SS1-1.5	YF1-B28-SS1-1.5	se/le	<100		<100	1C	BC .
PCB'S (5N8080)							
771-B3-SS1-1.0	771-821-SS1-1.8	ag/lg	1D		JD.	NC NC	NC
781-84-SS1-0.5	VF1-B22-SS1-0.5	ug/lg	10		AD	IC.	#C
7F1-B9-SS1-0	VF1-B26-SS1-0	ug/le	ED .		10	RC	#C
771-810-SS1-0.5	7F1-B27-SS1-0.5	og/Ig	n		#D	AC.	RC
FF1-813-SS1-1.5	7F1-B28-SS1-1.5	ug/Eg	RD		RD.	AC	RC
SEEL-VOLATILE ORGANICS			**		**	10	S C
771-B3-SS1-1.0	TY1-821-SS1-1.0	ng/Lg	AD .		10	BC BC	NC
771-84-551-0.5	771-822-SS1-0.5	ng/Lg	1D		10		#C
YF1-89-SS1-0	771-B26-S51-0	16/26	RD .		10	IC	#C
771-B10-SS1-0.5	TF1-B27-5S1-0.5	og/lg	10		ID	IC IC	1C 32
VV1-B13-SS1-1.5	TF1-B28-SS1-1.5	ng/Lg	RD		1)	BC.	86
BETALS - LEAD (1239.2)							
FF1-B3-SS1-1.0	VV1-B21-S51-1.8	ng/Lg	1.7		1.6	1.65	6.1
771-B4-SS1-0.5	VF1-822-551-0.5	16/6	62.05		85.4	73.5	31.2
TT1-89-551-0	771-B26-SS1-0	ng/lg	2.3		2.3	2.3	0
YF1-B10-SS1-0.5	771-827-SS1-0.5	ng/lg	4.4		4.05	4.23	8.3
771-B13-SS1-1.5	FF1-B28-SS1-1.5	ng/Lg	0.8		2.4	1.6	100
I HOISTURE TOA (ASTE DE	918_71						
\$ 801510ER 108 (8518 02 \$71-83-551-1.0	7\$1-B21-SS1-1.0	:	(4	0
771-83-551-1.0 771-84-551-0.5	7F1-B22-SS1-0.5	i	È		· ;	4.5	66.7
	781-826-551-0	i	į		i	ï	•
VF1-89-551-0	171-820-331-0 171-827-551-0.5	i	5		Š	Š	i
FF1-810-SS1-0.5					ĭ	i	i
771-813-551-1.5	TF1-828-551-1.5	1	1		1	1	•

S - Reported value was determined by the method of Standard Additions BC - Not Calculated BD - Not Detected

TABLE F.S SOUBLET OF PESOLTS FOR CODED FIELD DUPLICATE WATER SAMPLES

IDENTIFIES NOUSES ONE (ACTUAL SAMPLE (D)	IDENTIFIER NUMBER TWO	DITS	PESOL? OIL		EESULT THO	···	AVERAGE	DELATIVE PERCEN
					····			
PERCEABLE DALOCATBORS (S								
18-1-41-681-55	1F-1-H5-G#1-ES	16/1	E0		10		AC	1C
ARONATIC TOLATILE ORGANI	CS (SM8020/E602)							
17-1-41-641-85	77-1-15-GH1-8S	ug/1	BERTERE	4.9	BEHZEME	4.5	4,70	8.5
			TOLUERE	1.44	10		AC.	IC.
			ITLINES	4	ITLEES	4.1	4.35	16.1
PETROLEUE ETDROCLEBORS (
77-1-41-681-ES	17-1-45-GW1-ES	ag/l	(1		đ		41	1C
TOTAL DISSOLTED SOLIDS (rica II							
77-1-81-GH1-ES	7F-1-45-GY1-ES	vg/l	129		164		146.5	23.9
		-4, -			•••		.,	••••
PCB'S (SX8080/E608)								
77-1-41-G¥1-ES	11-1-45-641- 6 5	eg/i	ED .		I)		IC	BC
SINI TOLATILE ORGANICS ()	1625)							
17-1-11-GH1-IS	77-1-45-641-25	ug/l	BAPBTBALERE	2.3	I)		EC	IC .
			BIS(2-ETHYLRITL)-					
			PETRALATE	1.1	19		EC	EC
BETALS:								
LEAD (\$239.2)								
ff-i-al-gri-es	77-1-45-GH1-ES	sg/l	0.010		0.020		₹.015	66.7
BERTLLIGH (8200.7)								
77-1-11-G11-IS	7F-1-85-GW1-28	eg/l	14		14		IC.	BC BC
:BEOWIGH (8288.7)								
77-1-41-GH1-ES	77-1-45-GN1-8 S	ng/l	14		TÅ		#C	BC
COPPER (#208.7)								
11-1-11-611-25	77-1-85-GN1-85	24/3	34		11		I C	BC
1196 (9966 T)								
IIRC (R200.7) 	TT-1-WS-GW1-ES	ag/1	114		14		I C	ac
	11 1 45 441 45	-6/4	**					

Nå - Not insigned NC - Not Calculated ND - Not Detected

ATTACHMENT - LABORATORY QC DATA

nce	ory
-Science	rate
Ing-S	Labor
seri	>
7	Berkele
Eng	Bei

QUALITY CONTROL RESULTS SUMMARY Environmental Quality Parameters

Page 1 of 1

ES Job No.: AT077

Client: ES Atlanta/Volk Field AFB

Attn.: Dan Lane
Address: 57 Executive Park South,

N.E., Suite 590 Atlanta, GA 30329

QC Report No.: TPH-W-0020-88 Date Reported: 5/05/88

Laboratory Supervisor Approval:

MANBURTER

Sample Matrix:

Water (mg/L)

Dilution Factor: NA QC Report for Sample Nos.: 88030558-0562, 88030566-0567, 88030572-0573

Analytical	Analytical Laboratory Sample Nos.	Sample Nos.	Date	Anal	Blank	_	Duplicate	•		Spike Recovery	acovery		Notes
Parameter	Parameter Duplicates Spike	Spike	Anal	Anal Method		ភ	C5	RPD	SA	SR SSR	SSR	PR	
Petrolem													

7

7.1

<u>-</u>

9

¥

=

Ş

-

418.1

Hydrocarbons 88030566 88030567 3/19/88

NC - Not calculated

C1 - Concentration One C2 - Concentration Two	SSR = Spiked Sample Result SR = Sample Result SA = Spike Added (Concentration)
$\frac{\text{C1 - C2}}{(\text{C1 + C2})/2} \times 100$	02
Relative Percent Difference (RPD) = $\frac{C1 - C2}{(C1 + C2)/2}$ x 100	Percent Recovery (PR) = SSR - SR x 100

A1 08

Percent recovery is within the ES laboratory control limits.

NA - Not applicable

ence	ory
Scie	orat
ng-	Labor
eeri	ley
Engin	Berke
	6

Page 1 of 1

ES Atlanta/Volk Field AFB Dan Lane AT 077 ES Job No.: Address: Client: Attn.:

57 Executive Park South,

Atlanta, GA 30329 N.E., Suite 590

Sample Matrix:

Water (mg/L)

Laboratory Supervisor Approval: Date Reported:

TPH-W-0021-88

QC Report No.:

5/05/88

QC Report for Sample Nos.: Dilution Factor:

88030539-0541, 88030551-0557

Analytical Parameter	Analytical Laboratory Sample Nos. Parameter Duplicates Spike	Sample Nos.		Date Anal Blank Anal Method	Blank	ี	Duplicate C2	e RPD	SA	Spike R SR	Spike Recovery SR SSR	PR	Notes
Petroleum Hydrocarbons	s 88030554	etroleum ydrocarbons 88030554 88030555 3/18/88	3/18/88	418.1 <1	▽	1.6 1.6	1.6	0	10	₽	. 41 7.2 72	72	•

Percent recovery is within the ES laboratory control limits.

NA - Not applicable NC - Not calculated

- Not calculated

C2 - Concentration Two C1 = Concentration One x 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$. Relative Percent Difference (RPD)

SSR - Spiked Sample Regult SR - Sample Result x 100 Percent Recovery (PR) = SSR - SR SA

- Spike Added (Concentration) SA

lence	tory
ng-Sct	Laboratory
neerir	keley I
Engin	Berke

Page 1 of 1

AT077 ES Job No.:

ES Atlanta/Volk Field AFB Client: Attn.:

57 Executive Park South, Dan Lane Address:

Atlanta, GA 30329 N.E., Suite 590

Sample Matrix:

Water (mg/L)

Laboratory Supervisor Approval: 5/05/88 Date Reported:

TPH-W-0024-88

QC Report No.:

88030558-0562, 88030565-0567, ž QC Report for Sample Nos.: Dilution Factor: 88030572-0573

Notes	
	PR
Spike Recovery	SSR
Spike	SR
	SA
t e	RPD
Duplicate	S
	<u>5</u>
Blank	
Date Anal	Method
Date	Anal
Sample Nos.	Spike
Laboratory Sample Nos	Duplicates
Analytical	Parameter

Percent recovery is within the ES laboratory control limits.

7

7.1

Ş

10

¥

<u>_</u>

Ş

Ţ

418.1

Hydrocarbons 88030566 88030567 3/19/88

Petroleum

NA - Not applicable

NC - Not calculated

C2 - Concentration Two C1 - Concentration One x 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$ Relative Percent Difference (RPD)

SSR - Spiked Sample Regult SR - Sample Result x 100 Percent Recovery (PR) = SSR - SR SA

ence	ory
5	a t
-	•
Sct	Labora
- 1	۵
ā	.9
극	-
	9
8	=
ě	•
ᅼ	×
ğ	erk
ũ	á

Page 1 of 1

TPH-W-0025-88

5/05/88

Date Reported: QC Report No.:

Laboratory Supervisor Approval:

ES Atlanta/Volk Field AFB AT077 ES Job No.: Client:

Dan Lane Address: Attn.:

57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Sample Matrix: Water (mg/L)

88030568-0569, 88030574-0576 OC Report for Sample Nos.: Dilution Factor:

Notes	
PR	
Spike Recovery SR SSR	
Spike 1	
SA	
te RPD	
Duplicate C2 RPD	
5	
Blank	
Anal Method	
Date Anal	
Analytical Laboratory Sample Nos. Date Parameter Duplicates Spike Anal	
Laboratory S Duplicates	
Analytical Parameter	

9

32

56

0

¥

-

-

~

418.1

Hydrocarbons 88030568 88030569 3/19/88

Petroleum

* Percent recovery is within the ES laboratory control limits.

NA - Not applicable

NC - Not calculated

C1 - Concentration One	C2 = Concentration Two
x 100	•
C1 - C2 x 100	(c1 + c2)/2
(RPD)	
: Difference	
-	
Relative Percen	

SSR - Spiked Sample Regult x 100 SSR - SR S Percent Recovery (PR) =

- Spike Added (Concentration) SR = Sample Regult SA = Spike Added (C

F-13

Environmental Quality Parameters QUALITY CONTROL RESULTS SUMMARY

> AT077 ES Job No.:

ES Atlanta/Volk Field AFB Client:

Jimy Duncan Address: Attn.:

Suite 590 57 Executive Park

Atlanta, GA 30329

Laboratory Supervisor Approval:

QC Report No.: TPH-S-0013-88

Date Reported: 4-04-88

Sample Matrix: Soil (mg/Kg)

ź

*Moisture:

88010186-0195 QC Report for Sample No.:

Notes	
PR	83
acovery SSR	830
Spike Recovery SR SSR	<100
SA	NC 1000
re RPD	NC
Duplicate C2	<100 <100
5	<100
Blank	418.1 <100
Anal Method	418.1
Date Anal	2-17-88
Sample Nos. Spike	88010186 88010186 2-17-
Laboratory Duplicates	88010186
Analytical Laboratory Sample Nos. Parameter Duplicates Spike	Petroleum Hydrocarbons

* If & moisture is reported, results are presented on a dry-weight basis. NC - Not calculated NA - Not applicable

C2 - Concentration Two C1 - Concentration One x 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$ ı Relative Percent Difference (RPD)

SSR - Spiked Sample Result x 100 SSR - SR SA Percent Recovery (PR) =

SR = Sample Result
SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS SUMMARY Environmental Quality Parameters

ES Job No.: AT077 Client: ES Atlan

ES Atlanta/Volk Field AFB

Attn.: Jimmy Duncan

Address: 57 Executive Park Suite 590

Atlanta, GA 30329

QC Report No.: TPH-S-0014-88
Date Reported: 4-04-88
Laboratory Supervisor Approval:

*Moisture:

isture:

ź

Sample Matrix: Soil (mg/Kg)

QC Report for Sample No.: 88010196-0199, 88010204-0209

Analytical Laboratory Sample Nos. Parameter Duplicates Spike	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	ເວ	Duplicate C2 R	RPD	S.	Spike Recovery SR SSR	COVERY	P.R.	Notes
Petroleum Hydrocarbons		88010204 88010204 2-17-88	2-17-88	418.1	418.1 <100 <100 <100	×100	×100	NC	1000	×100	860	86	

^{*} If & moisture is reported, results are presented on a dry-weight basis. NC - Not calculated NA - Not applicable

C1 = Concentration One C2 = Concentration Two	
0	
5	•
$\frac{\text{C1 - C2}}{(\text{C1 + C2})/2} \times 100$	
	,
(RPD)	
9	
eren	
otff	
Percent	
Relative Percent Difference (RPD) =	Developed

- Spike Added (Concentration) SSR = Spiked Sample Result SR - Sample Result x 100 SSR - SR S Percent Recovery (PR) =

176.13.2

QUALITY CONTROL RESULTS SUMMARY Environmental Quality Parameters

> ES Job No.: AT077 Client: ES At1

ES Atlanta/Volk Field AFB

Attn.: Jimmy Duncan Address: 57 Executive

57 Executive Park Suite 590

Atlanta, GA 30329

QC Report No.: TPH-S-0015-88
Date Reported: 4-04-88
Laboratory Supervisor Approval:

ž

*Molsture:

Sample Matrix: Soil (mg/Kg) QC Report for Sample No.: 88010210-0212, 88010214-0220

Analytical Parameter	Analytical Laboratory Sample Nos. Parameter Duplicates Spike	Sample Nos. Spike	. Date Anal	Anal Method	Blank	5	Duplicate C2	e RPD	SA	Spike Recovery SR SSR	COVERY	PR	Notes
Petroleum Hydrocarbons	1 88010220	88010220 88010220 2-17-88	2-17-88	418.1	418.1 <100	×100	×100	NG.	1000	<100	<100 1000	100	

* If & moisture is reported, results are presented on a dry-weight basis. NA - Not applicable NC - Not calculated

C2 = Concentration Two C1 - Concentration One x 100 $\frac{c1 - c2}{(c1 + c2)/2}$ Relative Percent Difference (RPD)

SSR = Spiked Sample Regult x 100 SSR - SR Percent Recovery (PR) =

SR = Sample Result
SA = Spike Added (Concentration)

176.13.3

-	
×	g
2	×
ence	ĭ
	9
77	ũ
Sc	
ï	da
	7
ng	Ğ
⋥	
1	>
	e X
ĕ	Ä
Š	•
-	×
۵	M
5	9

Page 1 of 1

AT077 ES Job No.:

ES Atlanta/Volk Field AFB Client:

Dan Lane Attn.:

57 Executive Park South, Address:

30329 N.E., Suite 590 Atlanta, GA

Laboratory Supervisor Approval: Date Reported:

TPH-S-0016-88

QC Report No.:

5/05/88

Sample Matrix:

Soil (mg/Kg)

QC Report for Sample Nos.: 88020289-0298 *Moisture:

Analytical Parameter	Laboratory Duplicates	Sample Nos.	Date Anai	Ana 1 We thod	Blank	1 5	Duplicate C2	e RPD	VS.	Spike Re SR	Recovery SSR	A	Notes
Petroleum Hydrocarbons	88020289	88020289 88020289 2/27/88	2/27/88		418.1 <100 <100 <100	<100	×100	NC	1000	1000 <100	920	92	

If & moisture is reported, results are presented on a dry-weight basis.

NC - Not calculated NA - Not applicable

C2 - Concentration Two C1 - Concentration One × 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$ Relative Percent Difference (RPD)

x 100 SSR - SR Percent Recovery (PR) =

SSR - Spiked Sample Result SA

SR = Sample Result SA = Spike Added (Concentration)

181.3.2

QUALITY CONTROL RESULTS SUMMARY Environmental Quality Parameters

Page 1 of 1

ES Job No.: AT077

Client: ES Atlanta/Volk Field AFB

Attn.: Dan Lane

Address: 57 Executive Park South,

N.E., Suite 590 Atlanta, GA 30329

QC Report No.: TPH-S-0017-88
Date Reported: 5/05/88
Laboratory Supervisor Approval:

Sample Matrix:

Soll (mg/Kg)

*Moisture: NA QC Report for Sample Nos.:

88020299-0300, 88020371-0378

0

81

810

100

1000

Z

<100

<100

418.1 <100

Hydrocarbons 88020299 88020299 2/27/88

Analytical Parameter	Analytical Laboratory Sample Nos. Parameter Duplicates Spike	Sample Nos.	Date	Date Anal I	Blank	5	Duplicate			Spike Recovery	scovery		Notes
				10110		5	7	N PD	V _O	S.	SSR	PR	
Petroleum		-											

If & moisture is reported, results are presented on a dry-weight basis.

NA - Not applicable

NC - Not calculated

C2 = Concentration Two C1 - Concentration One SA - Spike Added (Concentration) SSR - Spiked Sample Result - Sample Result x 100 $\frac{c1 - c2}{(c1 + c2)/2}$ SR x 100 SSR - SR SA Relative Percent Difference (RPD) Percent Recovery (PR) =

181.3.1

ENGINEERING-SCIENCE, INC.

Engineering-Science QUALITY CONTROL RESULTS SUMMARY Page 1 of 1

Volatile Organics EPA 601/602/8010/8020

ES Job No.: AT077

Client : ES Atlanta/Volk AFB

QC Report No.: Date Reported: VGC-W-0019-88

5/12/88

Attn

: Dan Lane

3/14/88

Date Analyzed:

Address : 57 Executive Park South, Laboratory Supervisor Approval:

N.E., Suite 590

Atlanta, GA 30329

Lab Sample Nos.:

Halocarbons 601/8010

Aromatics 602/8020

Spike Duplicate Spike

88030522 88030522 88030522 88030522

Sample Matrix: Soil (ug/Kg)

QC Report for Samples: 88030522-0523, 88030527-0533, 88030536

Spike	Recovery	ES QC Limits*
SA SR	SSR PR	RPD %Recovery
10 ND	9.4 94	56 44-156
10 ND	10.6 106	38 62-138
10 ND	10.8 108	44 56-144
10 ND	10.0 100	45 55-145
10 NTD	11.8 118	41 58-142
10 NTD	13.3 133	34 67-133
	10 NTD	10 ND 13.3 133

^{*} Asterisked values are outside of ES QC limits.

Relative Percent Difference (RPD) =
$$\frac{C1 - C2}{(C1 + C2)/2}$$
 x 100 C1 = Spike Sample C2 = Duplicate Spike Sample

SSR = Spiked Sample Result

Percent Recovery (PR) = SSR - SR x 100

SR = Sample Result

SA = Spike Added (Concentration)

181.18.4

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limits.

Engineering-Science

QUALITY CONTROL RESULTS SUMMARY Page 1 of 1

Volatile Organics

EPA 601/602/8010/8020

ES Job No.: AT077

QC Report No.:

VGC-W-0020-88

Client

: ES Atlanta/Volk AFB

Date Reported:

5/12/88

Attn

: Dan Lane

3/17/88

Date Analyzed:

Address : 57 Executive Park South,

Laboratory Supervisor Approval:

N.E., Suite 590

Atlanta, GA 30329

Lab Sample Nos.:

Halocarbons 601/8010

Aromatics 602/8020

Spike Duplicate

88030540

88030540

Spike

88030540

88030540

Sample Matrix: Soil (ug/Kg)

QC Report for Samples: 88030537-0542, 88030551-0554

Compound	Blank		Duplic	ates	S	pike R	ecover	у	ES	QC Limits*
		C1	C2	RPD	SA	SR	SSR	PR	RPD	*Recovery
Halocarbons: 601/8010										
1,1-dichloroethane	ND	9.8	10.4	6	10	ND	9.8	98	56	44-156
Trichloroethene	ND	9.9	10.8	9	10	ND	9.9	99	38	62-138
Chlorobenzene	ND .	10.5	11.0	5	10	ND	10.5	105	44	56-144
Aromatics: 602/8020										
Benzene	ND	14.8	14.7	1	10	4.9	14.8	99	45	55-145
Toluene	ND	11.1	10.5	6	10	0.50	11.1	106	41	58-142
Chlorobenzene	ND	12.6	13.6	8	10	ND	12.6	126	34	67-133

Asterisked values are outside of ES QC limits.

Relative Percent Difference (RPD) =
$$\frac{C1 - C2}{(C1 + C2)/2}$$
 x 100 C1 = Spike Sample C2 = Duplicate Spike Sample

SSR = Spiked Sample Result SR = Sample Result

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limits.

ENGINEERING-SCIENCE, INC.

Engineering-Science

QUALITY CONTROL RESULTS SUMMARY Page 1 of 1

Volatile Organics EPA 601/602/8010/8020

ES Job No.: AT077

: ES Atlanta/Volk AFB

QC Report No.:

VGC-W-0021-88

Client

Date Reported:

5/12/88

Attn

: Dan Lane

: 57 Executive Park South,

Date Analyzed:

3/21/88

Address

N.E., Suite 590

Atlanta, GA 30329

Laboratory Supervisor Approval:

Lab Sample Nos.:

Halocarbons 601/8010

Aromatics 602/8020

Spike Duplicate

88030558

88030558

Spike

88030558

88030558

Sample Matrix: Soil (ug/Kg)

QC Report for Samples: 88030555-0563, 88030565

Compound	Blank		Duplica	tes	S	pike I	Recover	y	ES	QC Limits*
	_	C1	C2	RPD	SA	SR	SSR	PR	RPD	Recovery
Halocarbons: 601/8010										
1,1-dichloroethane	ND	10.3	10.6	3	10	ND	10.3	103	56	44-156
Trichloroethene	ND	10.4	10.5	1	10	ND	10.4	104	38	62-138
Chlorobenzene .	ND	10.4	10.5	1	10	ND	10.4	104	44	56-144
Aromatics: 602/8020										
Benzene	ND	10.2	10.3	1	10	ND	10.2	102	45	55-145
Toluene	ND	10.1	10.4	3	10	ND	10.1	101	41	58-142
Chlorobenzene	ND	9.9	9.9	0	10	ND	9.9	99	34	67-133

^{*} Asterisked values are outside of ES QC limits.

Relative Percent Difference (RPD) = $\frac{C1 - C2}{(C1 + C2)/2}$ x 100 C1 = Spike Sample C2 = Duplicate Spike Spike Spike Sample C2 = Duplicate Spike Sp

C2 = Duplicate Spike Sample

Percent Recovery (PR) = SSR - SR x 100

SSR = Spiked Sample Result

SR = Sample Result

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limits.

Engineering-Science

QUALITY CONTROL RESULTS SUMMARY Page 1 of 1

Volatile Organics EPA 601/602/8010/8020

ES Job No.: AT077

QC Report No.:

VGC-W-0022-88

Client : ES Atlanta/Volk AFB

Date Reported:

5/12/88

Attn

: Dan Lane

3/21/88

Address

: 57 Executive Park South,

Date Analyzed:

N.E., Suite 590 Atlanta, GA 30329 Laboratory Supervisor Approval:

Lab Sample Nos.:

Halocarbons 601/8010

Aromatics 602/8020

Spike Duplicate

88030566

88030566

Spike

88030566

88030566

Sample Matrix: Soil (ug/Kg)

QC Report for Samples: 88030566-0568, 88030570, 88030574, 88030576-0577

Blank		Duplic	ates	S	pike R	ecover	y	ES	QC Limits*
	C1	C2	RPD	SA	SR	SSR	PR	RPD	*Recovery
ND	10.6	10.9	3	10	ND	10.6	106	56	44-156
ND	11.2	10.2	9	10	ND	11.2	112	38	62-138
ND	10.4	11.4	9	10	ND	10.4	104	44	56-144
ND	10.0	11.0	10	10	1.2	10.0	88	45	55-145
ND	14.8	16.3	10	10	6.0	14.8	88	41	58-142
ND	10.6	11.3	6	10	ND	10.6	106	34	67-133
	ND ND ND ND	ND 10.6 ND 11.2 ND 10.4 ND 10.0 ND 14.8	ND 10.6 10.9 ND 11.2 10.2 ND 10.4 11.4 ND 10.0 11.0 ND 14.8 16.3	ND 10.6 10.9 3 ND 11.2 10.2 9 ND 10.4 11.4 9 ND 10.0 11.0 10 ND 14.8 16.3 10	ND 10.6 10.9 3 10 ND 11.2 10.2 9 10 ND 10.4 11.4 9 10 ND 10.0 11.0 10 10 ND 14.8 16.3 10 10	C1 C2 RPD SA SR ND 10.6 10.9 3 10 ND ND 11.2 10.2 9 10 ND ND 10.4 11.4 9 10 ND ND 10.0 11.0 10 10 1.2 ND 14.8 16.3 10 10 6.0	C1 C2 RPD SA SR SSR ND 10.6 10.9 3 10 ND 10.6 ND 11.2 10.2 9 10 ND 11.2 ND 10.4 11.4 9 10 ND 10.4 ND 10.0 11.0 10 10 1.2 10.0 ND 14.8 16.3 10 10 6.0 14.8	C1 C2 RPD SA SR SR PR ND 10.6 10.9 3 10 ND 10.6 106 ND 11.2 10.2 9 10 ND 11.2 112 ND 10.4 11.4 9 10 ND 10.4 104 ND 10.0 11.0 10 10 1.2 10.0 88 ND 14.8 16.3 10 10 6.0 14.8 88	C1 C2 RPD SA SR SR PR RPD ND 10.6 10.9 3 10 ND 10.6 106 56 ND 11.2 10.2 9 10 ND 11.2 112 38 ND 10.4 11.4 9 10 ND 10.4 104 44 ND 10.0 11.0 10 10 1.2 10.0 88 45 ND 14.8 16.3 10 10 6.0 14.8 88 41

^{*} Asterisked values are outside of ES QC limits.

Relative Percent Difference (RPD) =
$$\frac{C1 - C2}{(C1 + C2)/2}$$
 x 100 C1 = Spike Sample C2 = Duplicate Spike Sample

Percent Recovery (PR) = SSR - SR x 100

SSR = Spiked Sample Result

SR = Sample Result

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limits.

QUALITY CONTROL RESULTS SUMMARY VOLATILE ORGANICS EPA 601/602/8010/8020

ES Job No.: AT077

Lab Sample No.:

VGC-W-0024-88

Client:

ES Atlanta/Volk field AFB

Date Reported:

5-23-88

Attention:

Dan Lane

Date Analyzed:

3-23-88

Address:

57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329 Laboratory Supervisor Approval:

Halocarbons 601/8010

Aromatics 602/8020

Spike Duplicate

NA

88030573 88030573

Spike

NA

Sample Matrix:

Water (ug/L)

Dilution:

25

QC Report for Samples:88030569, 88030572-0573, 88030575

Compound	Blank		Duplic	ates	S	pike	Recov	ery	ES Q	Limits
-		C1	C2	RPD	SA	SR	SSR	PR	RPD	\$Recovery
Halocarbons: 601/8010	,, 									
1,1-dichloroethane	ND	NA	NA	NA	NA	ND	NA	NA	56	44-156
Trichloroethene	ND	NA	NA	NA	NA	ND	NA	NA	38	62-138
Chlorobenzene	ND	NA	NA	NA	NA	ND	NA	NA	44	56-144
Aromatics: 602/8020										
Benzene	ND	404	384	5	250	29	404	150*	45	55-145
Toluene	ND	296	285	4	250	40	296	102	41	58-142
Chlorobenzene	ND	198	118	51 *	250	ND	198	79	34	67-133

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limit.

Relative Percent Difference (RPD) =
$$\frac{C1 - C2}{(C1 + C2)/2}$$
 x 100

C1 = Spike Sample

C2 = Spike Duplicate

Percent Recovery (PR) = SSR - SR x 100 SSR = Spiked Sample Result

SR = Sample Result SA

Asterisked values are outside of ES QC limits. Xylenes interferences encountered in the aromatics determination.

Engineering-Science QUALITY CONTROL RESULTS SUMMARY Volatile Organics EPA 601/602/8010/8020

ES Job No.: AT064

QC Report No.:

VGC-S-0003-88

Client : ES Atlanta/Volk AFB

Date Reported:

4-06-88

Attn

: Jimmy Duncan

2-18-88

Address : 57 Executive Park South,

Date Analyzed:

Laboratory Supervisor Approval:

N.E., Suite 590

Atlanta, GA 30329

Spike Duplicate

Halocarbons 601/8010

Aromatics 602/8020

Spike

88020299 88020299 88020299 88020299

Sample Matrix: Soil (ug/Kg)

QC Report for Samples: 88020299-0300, 88020371-0378

Compound	Blank	1	Duplic	ates	S	pike 1	Recover	y	ES	QC Limits
		C1	C2	RPD	SA	SR	SSR	PR	RPD	Recovery
Halocarbons: 601/8010										
1,1-dichloroethane	ND	9.4	10.0	6	10	ND	9.4	94	56	44-156
Trichloroethene	ND	9.3	9.3	0	10	ND	9.3	93	38	62-138
Chlorobenzene	ND	9.6	10.1	5	10	ND	9.6	96	44	56-144
Aromatics: 602/8020										
Benzene	ND	9.9	9.6	3	10	ND	9.9	99	45	55-145
Toluene	ND	10.0	9.6	4	10	ND	10.0	100	41	58-142
Chlorobenzene	MD	9.9	9.3	6	10	ND	9.9	99	34	67-133

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limit

Relative Percent Difference (RPD) =
$$\frac{C1 - C2}{(C1 + C2)/2}$$
 x 100 C1 = Spike Sample C2 = Spike Duplicate

SR = Sample Result

SA = Spike Added (Concentration)

SSR = Spiked Sample Result

176.41.1

^{*} Asterisked values are outside of ES QC limits.

Engineering-Science QUALITY CONTROL RESULTS SUMMARY Volatile Organics EPA 601/602/8010/8020

ES Job No.: AT064

QC Report No.:

VGC-S-0006-88

Client : ES Atlanta/Volk AFB

Date Reported:

4-06-88

Attn

: Jimmy Duncan

Date Analyzed:

2-08-88

Address : 57 Executive Park South,

Laboratory Supervisor Approval:

N.E., Suite 590 Atlanta, GA 30329

Spike Duplicate

Halocarbons 601/8010

Aromatics 602/8020

Spike

88010186 88010186

88010186 88010186

Sample Matrix:

Soil (ug/Kg)

QC Report for Samples: 88010186-0193, 88010195-0196

Blank		Duplic	cates	S	pike	Recove	ry	ES	QC Limits
	C1	C2	RPD	SA	SR	SSR	PR	RPD	Recovery
ND	9.1	8.3	9	10	ND	9.1	91	56	44-156
ND	9.6	9.2	4	10	ND	9.6	96	38	62-138
ND	10.6	10.7	1	10	ND	10.6	106	44	56-144
ND	10.2	9.6	6	10	ND	10.2	102	45	55-145
ND	9.2	8.8	4	10	ND	9.2	92	41	58-142
ND	10.0	9.9	1	10	ND	10.0	100	34	67-133
	ND ND ND	ND 9.1 ND 9.6 ND 10.6 ND 10.2 ND 9.2	C1 C2 ND 9.1 8.3 ND 9.6 9.2 ND 10.6 10.7 ND 10.2 9.6 ND 9.2 8.8	C1 C2 RPD ND 9.1 8.3 9 ND 9.6 9.2 4 ND 10.6 10.7 1 ND 10.2 9.6 6 ND 9.2 8.8 4	ND 9.1 8.3 9 10 ND 9.6 9.2 4 10 ND 10.6 10.7 1 10 ND 10.2 9.6 6 10 ND 9.2 8.8 4 10	ND 9.1 8.3 9 10 ND ND 9.6 9.2 4 10 ND ND 10.6 10.7 1 10 ND ND ND ND 9.2 8.8 4 10 ND	C1 C2 RPD SA SR SSR ND 9.1 8.3 9 10 ND 9.1 ND 9.6 9.2 4 10 ND 9.6 ND 10.6 10.7 1 10 ND 10.6 ND 10.2 9.6 6 10 ND 10.2 ND 9.2 8.8 4 10 ND 9.2	C1 C2 RPD SA SR SSR PR NID 9.1 8.3 9 10 NID 9.1 91 NID 9.6 9.2 4 10 NID 9.6 96 NID 10.6 10.7 1 10 NID 10.6 106 NID 10.2 9.6 6 10 NID 10.2 102 NID 9.2 8.8 4 10 NID 9.2 92	C1 C2 RPD SA SR SSR PR RPD ND 9.1 8.3 9 10 ND 9.1 91 56 ND 9.6 9.2 4 10 ND 9.6 96 38 ND 10.6 10.7 1 10 ND 10.6 106 44 ND 10.2 9.6 6 10 ND 10.2 102 45 ND 9.2 8.8 4 10 ND 9.2 92 41

ND - Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limit

Relative Percent Difference (RPD) =
$$\frac{C1 - C2}{(C1 + C2)/2}$$
 x 100 C1 = Spike Sample C2 = Duplicate Spike Sample

Percent Recovery (PR) = SSR - SR x 100

SSR = Spiked Sample Result

SR = Sample Result

^{*} Asterisked values are outside of ES QC limits.

Engineering-Science

QUALITY CONTROL RESULTS SUMMARY Volatile Organics EPA 601/602/8010/8020

ES Job No.: AT064

QC Report No.:

VGC-S-0007-88

Client : ES Atlanta/Volk AFB : Jimmy Duncan

Date Reported:

4-06-88

Date Analyzed:

Address

: 57 Executive Park South,

2-08-88

N.E., Suite 590 Atlanta, GA 30329 Laboratory Supervisor Approval:

Spike Duplicate

Halocarbons 601/8010

Aromatics 602/8020

88010194

88010194

Spike

88010194

88010194

Sample Matrix: Soil (ug/Kg)

QC Report for Samples: 88010194, 88010197-0209

Compound	Blank		Duplic	cates	S	pike	Recove	ry	ES	QC Limits
<u> </u>		C1	C2_	RPD	SA	SR	SSR	PR	RPD	Recovery
Halocarbons: 601/8010										
1,1-dichloroethane	ND	8.1	8.5	5	10	ND	8.1	81	56	44-156
Trichloroethene	ND	8.9	9.0	1	10	ND	8.9	89	38	62-138
Chlorobenzene	ND	10.3	10.5	2	10	ND	10.3	103	44	56-144
Aromatics: 602/8020										
Benzene	ND	9.6	9.9	3	10	ND	9.6	96	45	55-145
Toluene	ND	8.5	8.5	0	10	ND	8.5	85	41	58-142
Chlorobenzene	ND	8.7	9.8	12	10	ND	8.7	87	34	67-133

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limit

Relative Percent Difference (RPD) =
$$\frac{C1 - C2}{(C1 + C2)/2}$$
 x 100 C1 = Spike Sample C2 = Duplicate Spike Sample

SR = Sample Result

SA = Spike Added (Concentration)

SSR = Spiked Sample Result

176.40.2

^{*} Asterisked values are outside of ES QC limits.

ENGINEERING-SCIENCE, INC.

Engineering-Science

QUALITY CONTROL RESULTS SUMMARY Page 1 of 1

Volatile Organics EPA 601/602/8010/8020

ES Job No.: AT077

QC Report No.:

VGC-S-0008-88

Client : ES Atlanta/Volk AFB

Atlanta, GA 30329

Date Reported:

5/12/88

Attn

: Dan Lane

Address

Date Analyzed:

2/10/88

: 57 Executive Park South, N.E., Suite 590

Laboratory Supervisor Approval:

Lab Sample Nos.:

Halocarbons 601/8010

Aromatics 602/8020

Spike Duplicate

88010210

88010210

Spike

88010210

88010210

Sample Matrix: Soil (ug/Kg)

QC Report for Samples: 88010210-0212, 8801214-0220

Compound	Blank		Duplica	tes	S	pike i	Recover	y	ES	QC Limits*
		C1	C2	RPD	SA	SR	SSR	PR	RPD	Recovery
Halocarbons: 601/8010										<u>_</u> , .
1,1-dichloroethane	ND	9.6	10.1	5	10	ND	9.6	96	56	44-156
Trichloroethene	ND	9.5	9.9	4	10	ND	9.5	95	38	62-138
Chlorobenzene	ND	9.0	10.3	13	10	ND	9.0	90	44	56-144
Arcmatics: 602/8020										
Benzene	ND	10.2	9.4	8	10	ND	10.2	102	45	55-145
Toluene	ND	10.0	9.9	1	10	ND	10.0	100	41	58-142
Chlorobenzene	ND	9.6	9.6	0	10	ND	9.6	96	34	67-133

^{*} Asterisked values are outside of ES QC limits.

Relative Percent Difference (RPD) =
$$\frac{C1 - C2}{(C1 + C2)/2}$$
 x 100 C1 = Spike Sample C2 = Duplicate Spike Sample

Percent Recovery (PR) = SSR - SR x 100

SR = Sample Result

SA = Spike Added (Concentration)

SSR = Spiked Sample Result

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limits.

Engineering-Science

QUALITY CONTROL RESULTS SUMMARY Volatile Organics EPA 601/602/8010/8020

ES Job No.: AT064

QC Report No.:

VGC-S-0009-88

Client : ES Atlanta/Volk AFB

4-06-88

Attn

: Jimmy Duncan

Date Reported:

Date Analyzed:

2-18-88

Address

: 57 Executive Park South,

N.E., Suite 590 Atlanta, GA 30329 Laboratory Supervisor Approval:

Spike Duplicate

Halocarbons 601/8010

Aromatics 602/8020

88020289

88020289

Spike

88020289

88020289

Sample Matrix: Soil (ug/Kg)

QC Report for Samples: 88020289-0298

Compound	Blank		Oupli	cates	S	pike 1	Recover	y	ES	QC Limits
		C1	_C2_	RPD	SA	SR	SSR	PR	RPD	Recovery
Halocarbons: 601/8010										
1,1-dichloroethane	ND	10.3	8.6	18	10	ND	10.3	103	56	44-156
Trichloroethene	ND	9.5	8.8	8	10	ND	9.5	95	38	62-138
Chlorobenzene	ND	9.6	9.7	1	10	ND	9.6	96	44	56-144
Aromatics: 602/8020										
Benzene	ND	11.6	9.5	20	10	ND	11.6	116	45	55-145
Toluene	ND	10.3	9.8	5	10	ND	10.3	103	41	58-142
Chlorobenzene	ND	10.3	9.4	9	10	ND	10.3	103	34	67-133

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limit

Relative Percent Difference (RPD) =
$$\frac{C1 - C2}{(C1 + C2)/2}$$
 x 100 C1 = Spike Sample C2 = Spike Duplicate

SSR = Spiked Sample Result

Percent Recovery (PR) = SSR - SR x 100 SA

SR = Sample Result

SA = Spike Added (Concentration)

176.41.3

^{*} Asterisked values are outside of ES QC limits.

Engineering-Science

QUALITY CONTROL RESULTS SUMMARY Page 1 of 1

Volatile Organics EPA 601/602/8010/8020

ES Job No.: AT077

QC Report No.:

VGC-S-0010-88

Client

: ES Atlanta/Volk AFB

Date Reported:

5/11/88

Attn

: Dan Lane

2/18/88

Date Analyzed:

Address

: 57 Executive Park South,

Laboratory Supervisor Approval:

N.E., Suite 590

Atlanta, GA 30329

Lab Sample Nos.:

Halocarbons 601/8010

Aromatics 602/8020

Spike Duplicates

88020299

88020299

Spike

88020299

88020299

Sample Matrix: Soil (ug/Kg)

OC Report for Sample:

88020299-0300, 88020371-0378

Compound	Blank		Duplic	ates	S	pike	Recove	ry	ES	QC Limits*
		C1	C2	RPD	SA	SR	SSR	PR	RPD	Recovery
Halocarbons: 601/8010										
1,1-dichloroethane	ND	9.4	10.0	6	10	ND	9.4	94	56	44-156
Trichloroethene	ND	9.3	9.3	0	10	ИD	9.3	93	38	62-138
Chlorobenzene	ND	9.6	10.1	5	10	ND	9.6	96	44	56-144
Aromatics: 602/8020										
Benzene	ND	9.9	9.6	3	10	ND	9.9	99	45	55-145
Toluene	ND	10.0	9.6	4	10	ND	10.0	100	41	58-142
Chlorobenzene	ND	9.9	9.3	6	10	ND	9.9	99	34	67-133

^{*} Asterisked values are outside of ES QC limits.

SA

Relative Percent Difference (RPD) =
$$\frac{C1 - C2}{(C1 + C2)/2}$$
 x 100 C1 = Spike Sample C2 = Duplicate Spike Sample

Percent Recovery (PR) = SSR - SR x 100

SSR = Spiked Sample Result SR = Sample Result

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limits.

SURROGATE PERCENT RECOVERY

SOIL

DATE REPORTED: 9-26-88

Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

Project: Volk Field AFB

Sample Nos.	1-chloro-2-bromopropane (14-158)	a-a-a-trifluorotoluene (7-187)
88010186	113	1 82
88010187	80	100
88010188	103	113
88010189	109	96
88010190	74	105
88010191	96	101
88010192	104	112
88010193	96	105
88010194	90	102
88010195	92	79
88010196	101	123
88010197	104	110
88010198	94	1 77
88010199	90	1 19
88010204	82	100
88010205	101	104
88010206	99	98
88010207	88	l 95
88010208	102	90
88010209	97	108
88010210	91	116
88010211	96	l 95
88010212	85	82
88010214	83	89
88010215	122	106
88010216	106	103
88010217	99	111
88010218	101	114
88010219	113	108
88010220	107	128

^{*} Asterisked values are outside of ES Laboratory limits.

EPA has not established percent recovery limits for these compounds.

Laboratory Supervisor Approval:

SOIL

DATE REPORTED: 9-29-88

Job No.: AT077

Client: ES Atlanta

Attention: Dan Lane

Address: 57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

Project: Volk Field AFB

Sample Nos.	-	1-chloro-2-bromopropane (14-158)	a-a-a-trifluorotoluene (7-187)
88010186 MS	1	100	187
88010186 MSD	ł	103	149
88010194 MS	1	97	49
88010194 MSD	1	104	197*
88010210 MS	l	98	61
88010210 MSD	ł	106	70
88020289 MS	ł	98	102
88020289 MSD	Ì	97	95
88020299 MS	1	101	100
88020299 MSD	i	100	94
88020383 MS	ĺ	93	91
88020383 MSD	1	96	90
· -	1		

^{*} Asterisked values are outside of ES Laboratory limits. EPA has not established percent recovery limits for these compounds.

Laboratory Supervisor Approval:

SOIL

DATE REPORTED: 9-26-88

Laboratory Supervisor Approval:

Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329

Project: Volk Field AFB

Sample Nos.	1-chloro-2-bromopropane (14-158)	a-a-a-trifluorotoluene (7-187)
88020289	99	1 81
88020290	97	l 97
88020291	109	100
88020292	98	1 93
88020293	114	104
88020294	112	106
88020295	93	1 94
88020296	108	102
88020297	102	l 90
88020298	95	1 97
88020299	95	l 83
88020300	95	101
88020371	93	100
88020372	89	100
88020373	96	101
88020374	110	120
88020375	98	102
88020376	108	l 93
88020377	108	ł 89
88020378	87	l 88
88020383	102	l 90
88020384	105	93
88020385	112	1 98

^{*} Asterisked values are outside of ES Laboratory limits.

EPA has not established percent recovery limits for these compounds.

WATER

DATE REPORTED: 9-29-88

Job No.: AT077

Client: ES Atlanta

Attention: Dan Lane

Address: 57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

Project: Volk Field AFB

Sample Nos.	1-chloro-2-bromopropane (61-145)	a-a-a-trifluorotoluene (43-181)
88030522	1 92	1 86
88030522 MS	1 95	109
88030522 MSD	96	113
88030523	99	103
88030527	85	135
88030528	85	81
88030529	94	104
88030530	78	1 79
88030531	1 79	83
88030532	91	9 1
88030533	95	97
88030536	97	93
88030537	102	111
88030538	74	1 74
88030539	81	72
88030540	92	104
88030540 MS	103	112
88030540 MSD	110	109
88030541	100	122
88030542	88	101
88030551	74	110
88030552	82	110
88030553	100	l 97
88030554	<u>}</u> 80	ł 85
88030576	} 94	ł 83
88030577	l 89	104
88030573 MS	l NA	144
88030573 MSD	NA NA	123

^{*} Asterisked values are outside of ES Laboratory limits.

EPA has not established percent recovery limits for these compounds.

NA = Not Analyzed

Laboratory Supervisor Approval:

WATER

DATE REPORTED: 9-29-88

Job No.: ATO77

Client: ES Atlanta

Attention: Dan Lane

Laboratory Supervisor Approval:

AWBrite

Address: 57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

Project: Volk Field AFB

Sample Nos.	1-chloro-2-bromopropane (61-145)	a-a-a-trifluorotoluene (43-181)
88030555	106	96
88030556	90	83
88030557	88	1 84
88030558	86	88
88030558 MS	101	90
88030558 MSD	95	105
88030559	83	1 81
88030560	100	113
88030561	109	103
88030562	89	102
88030563	86	98
88030565	107	101
88030566	124	121
88030566 MS	97	105
88030566 MSD	102	115
88030567	106	68
88030568	110	116
88030569	83	98
88030570	113	125
88030572	86	100
88030573	112	125
88030574	85	95
88030575	96	102
88030561 MS	96	NA NA
88030561 MSD	69	NA NA

^{*} Asterisked values are outside of ES Laboratory limits. EPA has not established percent recovery limits for these compounds.

NA = Not Analyzed

WATER

DATE REPORTED: 9-26-88

Job No.: AT077

Client: ES Atlanta

Attention: Dan Lane Address:

57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

Project: Volk Field AFB

Sample Nos.	1-chloro-2-bromopropane (61-145)	a-a-a-trifluorotoluene (43-181
88071335	1 98 1	95
88071336	111	105
88071337	114	97
88071338	107	92
88071335 MS	74	81
88071335 MSD	1 65	109
	1	
	1	
	į	
	i 5	
	i i	
	1 1	
	1 1	
	1	
	1	
	1	
	1	

^{*} Asterisked values are outside of ES Laboratory limits. EPA has not established percent recovery limits for these compounds.

Laboratory Supervisor Approval:

QUALITY CONTROL REPORT EPA METHOD 625/8270 MATRIX: WATER

Client: ES Atlanta/Volk AFB

Job No.:

AT077

Attn:

Dan Lane

Address: 57 Execuitve Park South,

N.E., Suite 590 Atlanta, GA 30329 QC Report No.: BNA-W-0020-88

Date Reported: 5/12/88

Laboratory Supervisor Approval:

QC Report for Samples: 88030536-0540

UNIT: ug/L

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	: COMPOUND		SPIKE												QC LIMITS* :RECOVERY
	:1,2,4-Trichlorobenzene	_:	100	-:	ND**	:	72.	0:	72:	⁻ 71	.5:	72:	1:	28	_ : 39-98
B/N	: Acenaph thene	_:	100	:	ND	:	78.	4:	78:	79	.0:	79:	1:	31	: 46-118
SMO	:2,4-Dinitrotoluene	:	100	:	ND	:	75.	7:	76:	76	.8:	77:	1:	38	: 24-96
SAMPLE NO	:Pyrene	<u> </u>	100	:	ND	: 1	20	: 1	120:	114	:	114:	5:	31	: 26-127
:	:N-Nitroso Di-n-Propylamine	<u>_</u> :	100	:	ND	:	75.	8:	76:	74	.7:	75:	1:	38	:41-116
88030536	:1,4-Dichlorobenzene	_ :	100	:	ND	:	70.	3:	70:	71	.0:	71:	1:	28	: 36-97
	:	_:		_:_		_:_		_:_	:		:	:	:		:
ACID	:Pentachlorophenol	:	200	:	ND	-: 1	86	_:	93:	134	_:	67:	32:	50	: 9-103
SMO	:Phenol	_:	200	:	MD	:	70.	6:	35:	47	:	24:	40:	42	:12-89
SAMPLE NO	:2-Chlorophenol	<u>_</u> ;	200	:	ND	: 1	48	:	74:	107	•	54:	32:	40	: 27-123
	:4-Chloro-3-Methylphenol	<u>_</u> :	200	:	ND	: 1	54	:	77:	113	:	56:	31:	42	:23-97
88030536	:4-Nitrophenol	<u>_</u> :	200	:	ИD	:	78.	2:	39:	47	:	24:	50:	50	:10-80
	:	:		_:_	_	:	_	_:_	:		:	:	:		_ :

Date analyzed: 3/24/88

- * Asterisked values are outside of EPA QC limits
- ** ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88030536-0540

Date analyzed: 3/29/88

Compound

Quanity

Bis(2-ethylhexyl)phthalate

5.29

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

lient: ES Atlanta/Volk AFB

Job No.:

AT064

ttn: J

Jimmy Duncan

QC Report No.: BNA-W-0021-88

ddress: 57 Executive Park South, N.E., Suite 590

Date Reported: 4-28-88

4-28-88

Atlanta, GA 30329

bate Reported.

Laboratory Supervisor Approval:

© Report for Samples: 88030513, 88030522, 88030527-0531, 88030533

NIT: ug/L

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	: COMPOUND		. SPIKE	•	AMPLI ESUL												_		IMITS
	:1,2,4-Trichlorobenzene	_:	100	- :	ND	:	- 33	.3	: 33	* : ¯	- 33.	T :	33	3:	1:	_ ₂	8 ⁻ :	: 3	9-98
B/N	:Acenaphthene	<u>_</u> :	100	:	ND	:	35	. 3	: 35	*:	36.	1:	361	:	2 :	3	1 :	: 4	6-118
SMO	:2,4-Dinitrotoluene	<u> </u>	100	:	ND	:	38	. 4	: 38	:	40.	0:	40	:	4 :	3	8 :	: 2	4-96
SAMPLE NO	: Pyrene	_:	100	:	ND	:	22	.9	: 23	*:	25.	7:	26	: 1	2 :	3	1 :	: 2	6-127
	:N-Nitroso Di-n-Propylamine	<u> </u>	100	:	ND	:	36	.8	: 37	*:	41.	6:	42	: 1	2 :	3	8 :	: 4	1-116
88030531	:1,4-Dichlorobenzene	_:	100	:	ND	:	34	. 2	: 34	* :	35.	2:	351	•:	3 :	2	8 :	: 3	6-97
	:	_:		_:_		_:			:	_:_		_:		-: _	:		_:	:_	
ACID	:Pentachlorophenol	_:	200	-:-	ND	-:	55	.5	: 28	_:	65.	4:	33	: 1	6:	5	0:	:	9-103
SMO	:Phenol	<u>_</u> :	200	:	ND	:	27	.8	: 14	:	27.	8:	14	:	0 :	4	2 :	: 1	2-89
SAMPLE NO	: 2-Chlorophenol	<u>_</u> :	200	:	ND	:	50	. 5	: 25	* :	50.	6:	251	٠:	0 :	4	0 :	: 2	7-123
	:4-Chloro-3-Methylphenol	_:	200	:	ND	:	39	. 2	: 20	* :	38.	9:	191	:	1 :	4	2 :	: 2	3-97
88030531	:4-Nitrophenol	_ :	200	:	ND	:	44	.7	: 22	:	50.	4:	25	: 1	2 :	5	0 :	: 1	0-80
	:	- :		:		:			:	:		:		:	:		_ :	:	

ate analyzed: 3-15-88

Asterisked values are outside of EPA QC limits. Insufficient sample available for reextraction. A laboratory control sample showed the laboratory analysis is within control.

* ND = Not Detected

BLANK SUMMARY

lank Summary for Samples: 88030513, 88030522, 88030527-0531, 88030533 ate analyzed: 3-14-88

Compound
Diethyl phthalate
Bis(2-ethyl hexyl)phthalate

Quantity 39.5

2.1

OTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

Job No.:

AT077

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E., Suite 590

Atlanta, Ga. 30329

QC Report No.:

BNA-W-0023-88

Date Reported:

5-16-88

Laboratory Supervisor Approval:

QC Report for Samples:

88030568.

88030572-88030576

Unit: ug/L

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

Fraction	Compound	Conc.	Sample Result	Conc.	S Con		EPA QC Li	
	1,2,4-Trichlorobenzene	; 100	; ND	52.4	52 43.	7 44 17	1 28 39-9	8
B/N	Acenaphthene	¦ 100	ND	¦56.1	156 52.	4 52 7	31 46-1	18
SMO	2.4-Dinitrotoluene	100	ND	154.9	1 55 45.	6 46 18	1 38 24-96	6
SAMPLE #	Pyrene	100	; ND	145.7	1 46 48.	2 48 4	1 31 26-1	27
	N-Nitroso Di-n-Propylamine	100	ND	153.5	1 54 45.	9 46 16	1 38 41-1	16
88030568	1,4-Dichlorobenzene	100	ND	51.4	51 44.	3 44 15	28 36-9	7
ACID	Pentachlorophenol	200	¦ ND	157.6	1 29 82.	9 41 36	1 50 9-10)3
SMO	Phenol	200	ND	176.9	1 38 1 58.	2 29 28	1 42 12-8	39
SAMPLE #	2-Chlorophenol	200	ND	1117	59 100	50 16	1 40 27-1	23
	4-Chloro-3-Methylphenol	200	ND	¦ 120	60 65.	9 33 158*	1 42 23-9	7
88030568	4-Nitrophenol	200	ND	74.5	37 79.	6 40 7	50 10-8	

Date analyzed:

4-14-88

- Asterisked values are outside of EPA QC limits. 4-Chloro-3-methylphenol relative percent difference is outside the EPA range. Analysis of method blank spikes showed the laboratory to be in control.
- ** ND = Not detected

BLANK SUMMARY

Blank Summary for Samples:

88030568, 88030572-0576

Date analyzed: 4-14-88

Compound

Bis (2-ethylhexyl)phthalate

Quantity

6.3

NOTE: ALL SAMPLE RESULTS ARE BLANK SUBTRACTED

Job No.:

AT077

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

QC Report No.:

BNA-W-0024-88

Date Reported:

5-16-88

Laboratory Supervisor Approval:

auBuston

QC Report for Samples:

88030561-88030562, 88030564-88030567,

88030569

Unit: ug/L

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

raction	!	Compound	-	Conc. SA	1	Sample Result	•	one. MS		% REC	Conc MSD	REC	•	EPA RPD	QC Limits RECOVERY
	Ť	1,2,4-Trichloro-benzene	Ť	100	i	ND	1	51.3	3 1	51	1 49.9	1 50	1 3	28.	39-98
B/N	1	Acenaphthene	1	100	1	ND	1	55.3	3 l	55	1 55.8	1 56	j 1	1 31	46-118
SMO	1	2,4-Dinitrotoluene	1	100	1	ND	1	54.1	;	54	1 57.4	1 57	6	1 38	24-96
SAMPLE #	i	Pyrene	i	100	i	ND	1	51.0) ;	51	1 48.6	1 49	1 5	1 31	26-127
	1	N-Nitroso Di-n-Propylamine	i	100	i	ND	İ	51.3	3	51	51.6	52	1 1	1 38	41-116
88030566	İ	1,4-Dichlorobenzene	Ì	100	i	ND	Ì	51.1		51	48.4	1 48	1 5	1 28	36-97
ACID	:	Pentachlorophenol	:	200		ND	1	85.4	ļ ¦	43	1 83.9	1 42	1 2	1 50	9-103
SMO	Ì	Phenol	į	200	i	ND	ì	41.1	1	21	36.1	1 18	1 13	1 42	12-89
SAMPLE #	i	2-Chlorophenol	i	200	i	ND	i	63.9) i	32	1 56.3	•	1 13	1 40	27-123
	i	4-Chloro-3-Methylphenol	i	200	i	ND	i	49.2		_	46.1	-	7	42	23-97
88030566	i	4-Nitrophenol	i	200	i	ND	i	62.0	•		60.5		2	50	10-80

ate analyzed:

4/8/88

Asterisked values are outside of EPA QC limits.

ND = Not detected

BLANK SUMMARY

lank Summary for Samples:

88030561-0562.

Date analysed:4/8/88

88030564-0567. 88030569

Compound None detected

Quantity

OTE: ALL SAMPLE RESULTS ARE BLANK SUBTRACTED

Job No.:

AT077

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E., Suite 590

Atlanta, Ga. 30329

QC Report No.:

BNA-W-0025-88

Date Reported:

5-16-88

Laboratory Supervisor Approval:

QC Report for Samples:

88030551-88030560

Unit: ug/L

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

Fraction	Compound	Conc	. Sample Result	•	REC	Conc 1	C RPD	EPA RPD	QC Limit RECOVERY
	1,2,4-Trichlorobenzene	100	ND	60.9	61	46.1 40	5 28	28	39-98
B/N ¦	Acenaphthene	100	, ND	1 74.1	174	1 55.6 1 50	5 28	1 31	46-11
SMO ;	2,4-Dinitrotoluene	100	ND	1 73.6	174	61.4 6	1 19	1 38	24-96
SAMPLE # ;	Pyrene	100	, ND	1 49.9	: 50	1 46.5 1 40	5 8	1 31	26-12
1	N-Nitroso Di-n-Propylamine	100	ND	71.4	171	1 50.1 50	35	38	41-11
88030555	1,4-Dichlorobenzene	100	ND	63.2	63	43.2 4	3 38*	28	36-97
ACID	Pentachlorophenol	200	; ND	1 198	1 99	1181 9	1 9	1 50	9-10
SMO ;	Phenol	200	; ND	1 91.4	1 46	66.1 3	3 32	; 42	12-89
SAMPLE # {	2-Chlorophenol	200	ND	147	174	1103 5	1 35	40	27-12
}	4-Chloro-3-Methylphenol	200	ND	128	1 64	1129 6	5 1	42	23-97
88030555	4-Nitrophenol	200	ND	117	1 59	1113 5	7 3	50	10-80

Date analyzed:

4-8-88

Asterisked values are outside of EPA QC limits. Matrix effects caused the relative percent deviation for 1,4-dichlorobenzene to be higher than EPA recommended guidelines. Analysis of spiked blanks showed the laboratory to be in control.

** ND = Not detected

BLANK SUMMARY

Blank Summary for Samples:

88030551-88030560

Date analyzed:3-17-88

Compound

Bis (2-ethylhexyl) phthalate

Quantity

3

NOTE: ALL SAMPLE RESULTS ARE BLANK SUBTRACTED

SEMIVOLATILE SURROGATE PERCENT RECOVERY WATER

AT077 Job No.:

Jimmy Duncan ES Atlanta Client: Attn: Address:

57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329

Laboratory Supervisor Approval:

9-27-88

Date Reported:

Volk Field AFB Project:

F-41

Sample No.	Nitro-	2-Fluoro-	4,4'-Dibromo-	phenol-d5	2-Fluoro-	2,4,6-Tribromo-	
	Chenzene	Dipneny	orbnenyı	•	buenor	pnenol	
	35-114	43-116	33-141	10-94	21-100	10-123	
88030513	52	51	57	23	33	Lħ	
88030522	-	- 7	43	25	37	वर्ष	
88030527	75	75	017	56	37	38	
88030528	51	53	51	17	56	017	
88030529	52	53	57	20	31	39	
88030530	43	†	017	10	15 #	56	
88030531	38	43	34	* 2	* 6	21	
88030533	30 #	31	₹€	22	25	30	
	5 67	30 #	30	39	t1 #	75	
88030531 MSD	39	41 4	75	17	16 #	27	
Blank	55	55	89	22	53	51	
Blank MS	72	73	93	48	51	87	
Blank MSD	<i>L</i> 9	69	80	89	99	100	
88030536	52	09	81	22	33	09	
88030537	53	53	26	22	33	71	
88030538	55	65	61	19	33	52	
88030539	92	75	26	53	45	29	
88030540	82	82	83	35	38	52	
	1 8	81	101	53	917	7.1	
88030536 MSD	81	98	108	22	34	55	
Blank	75	78	92	20	33	52	

* Values are outside EPA QC limits.

SR-FRM05

88-A1-VOLK0097 1

88-A1-VOLK0098 1

SEMIVOLATILE SURROGATE PERCENT RECOVERY WATER

AT077 Job No.:

ES Atlanta Client: Attn:

57 Executive Park South N. E. - Suite 590 Atlanta, Ga. 30329 Jimmy Duncan Address:

Volk Field AFB

Project:

9-27-88

Date Reported:

Laboratory Supervisor Approval:

>		

Sample No.	Nitro-	2-Fluoro-	4,4'-Dibromo-	phenol-d5	2-Fluoro-	2,4,6-Tribromo-	
	penzene-d5	biphenyl	biphenyl		phenol	phenol	
	35-114	43-116	33-141	10-94	21-100	10–123	
88030551	617	58	92	28	38	53	
88030552	64	51	87	12	* 6	22	
88030553	* 6	*	15 #	* &	*	22	
88030553 R	* 6	*	# n-	* 80	* 1	20	
88030554	# 17	23 #	20	31	017	29	
88030554 R	56 *	23 #	18	31	017	29	
88030555	50	54	66	* 0	*	410 *	
88030555 R	50	54	66	33	35	36	
88030556	09	ħ9	70	32	43	99	
88030557	59	09	72	22	53	917	
88030558	42	45	58	19	25	38	
88030559	52	53	59	21	59	51	
88030560	36	41 *	65	15	5 0 *	817	
88030560 R	38	# 21	99	15	21	39	
88030555 MS	50	20	66	31	37	59	
88030555 MSD	68	73	109	Lħ	54	89	
Blank	58	52	93	21	33	09	

* Values are outside EPA QC limits. R Re-extracted sample results.

SEMIVOLATILE SURROGATE PERCENT RECOVERY WATER

AT077 Job No.:

Jimmy Duncan ES Atlanta Client: Attn:

57 Executive Park South Address:

N. E. - Suite 590 Atlanta, Ga. 30329

Volk Field AFB

Project:

F-43

Laboratory Supervisor Approval:

9-27-88

Date Reported:

Bucke

	Sample No.	Nitro- benzene-d5 35-114	2-Fluoro- biphenyl 43-116	4,4'-Dibromo- biphenyl 33-141	phenol-d5 10-94	2-Fluoro- phenol 21-100	2,4,6-Tribromo- phenol 10-123
71 65 74 71 74 71 88 84 80 84 60 65 8 * 26 * 8 8 * 30 * 8 MS 57 55 MSD 56 56 66 56 66 37 * 69 69 57	88030561	42	tit	54	14	19 *	37
74 71 54 55 88 84 60 65 8 * 26 * 84 8 3 * 26 * 84 8 30 * 86 MS 57 55 MS 57 55 MSD 56 56 66 37 * 86 66 37 * 87 69 55	88030562	7.1	65	95	50	59	50
S4 55 88 84 60 65 8 * 26 * 8 * 26 * 8 * 30 * 8 * 6 * 8 * 6 * 8 * 6 * 8 * 6 * 8 * 6 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 73 * 8 * 74 * 8 * 75 *	88030565	74	7.1	76	25	37	56
88 84 60 65 8 * 26 * 8 * 30 * MS 57 55 MSD 56 59 MSD 46 54 MSD 46 54 66 37 * 69 57	88030566	54	55	63	17	15 #	26
R 3 * 26 * 8 * 26 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 30	88030567	88	84	85	16	18	30
R 3 * 26 * R	88030568	09	65	70	58	25	35
R 3 * 26 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 30 * 8 * 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	88030569	* ©	56	15 #	36	611	116
R 30 * MS 57 55 MSD 56 56 MSD 49 50 66 37 * 69 57 69 55		*	56	15 #	34	9†	102
MS 57 55 MSD 56 56 MSD 46 54 MSD 49 50 66 37 *	88030572	* &	30 #	11 *	23	25	t t
MSD 57 55 MSD 56 56 MSD 46 54 MSD 49 50 66 37 * 69 57	88030572 R	11 *	17 *	* 6	22	52	54
MSD 56 56 MSD 46 59 MSD 49 50 66 37 1 69 57 69 55		57	55	62	19	16 *	56
MSD 46 59 MSD 49 50 66 37 # 69 57 58 55		26	26	89	17	17 *	28
MSD 46 54 49 50 66 37 * 82 73 69 57 58		55	59	61	34	37	45
49 50 66 37 * 82 73 69 57 58		917	54	70	58	30	₹£
66 37 * 82 73 * 69 57	Blank	6†	20	69	50	28	94
82 73 69 57 58 55	88030573	99	37 *	12 #	5 6	34	78
58 55	88030574	82	73	70	25	37	59
58 55	88030575	69	57	32	32	43	80
73 117	88030576	58	55	30	ħ2	33	52
N 04 05	88030573 R	ή9	99	23	22	52	75

* Values are outside EPA QC limits. R Re-extracted sample results.

QUALITY CONTROL REPORT EPA METHOD 625/8270 MATRIX: SOIL

:lient: ES Atlanta/Volk Field AFB

Job No.:

AT077

ttn:

Jimmy Duncan

ddress: 57 Executive Park South,

N.E., Suite 590 Atlanta, GA 30329 QC Report No.: BNA-S-0011Re-88

Date Reported: 3/15/88

Laboratory Supervisor Approval:

alithus do

C Report for Samples: 88010186 - 88010195

NIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	: COMPOUND	:CON	C. SPIKE									-	-	LIMITS*
	:1,2,4-Trichlorobenzene	_:	3.33	-:		•		-	1.92				_	38-107
B/N	:Acenaphthene	- :	3.33	:	ND				1.98:		2:	19	:	31-137
SMO	:2,4-Dinitrotoluene	- :	3.33	:	ND	:	2.80:	84	2.74:	82:	2:	47	:	28-89
SAMPLE NO	:Pyrene	- :	3.33	:	ND	:	1.84:	55:	1.79:	54:	3:	36	:	35-142
	:N-Nitroso Di-n-Propylamine	- :	3.33	:	ND	:	2.38:	71:	2.26:	68:	5:	38	:	41-126
88010186Re	:1,4-Dichlorobenzene	_ :	3.33	:	ND	:	1.93:	58:	1.94:	58:	1:	27	:	28-104
	<u> </u>	_ :		_:_	_	_:	:	:	::	:	:		: -	
ACID	:Pentachlorophenol_	_;	6.67	-:-	ND	:	4.87:	73	4.77:	72:	2:	47	:	17-109
SMO	: Phenol	_: :	6.67	:	ND	:	4.20:	63:	4.17:	62:	1:	35	:	26-90
SAMPLE NO	:2-Chlorophenol	_:	6.67	:	ND	:	3.93:	59:	4.10:	61:	4:	50	:	25-102
	:4-Chloro-3-Methylphenol	<u>_</u> ;	6.67	:	ND	:	4.63:	69 :	4.77:	72:	3:	33	:	26-103
88010186Re	:4-Nitrophenol	_:	6.67	:	ND	:	5.33:	80	5.27:	79:	1:	50	:	11-114
	•	_:		_ : _	_	:	:	:	::	:	:		:	

ate analyzed: 2-29-88

Asterisked values are outside of EPA QC limits

* ND = Not Detected

BLANK SUMMARY

lank Summary for Samples: 88010186 - 88010195

Date analyzed: 2-29-88

Compound

Quantity

None Found

IOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

74.3.3

:lient: ES Atlanta/Volk Field AFB

Job No.:

AT077

Jimmy Duncan

Address: 57 Executive Park South,

N.E., Suite 590 Atlanta, GA 30329 QC Report No.: BNA-S-0011-88 Date Reported: 3/15/88

Laboratory Supervisor Approval:

C Report for Samples: 88010186 - 88010195

NIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	: COMPOUND	:CONC	. SPIKE		AMPLI RESUL				CONC.				~	LIMITS*
	:1.2.4-Trichlorobenzene	- <u>:</u>	3.33	− ∷					2.45			_	_	38-107
B/N	:Acenaphthene	- :	3.33	:	ND	:	1.79	: 54:	2,28	: 68	: 24*	: 19	:	31-137
SMO	:2,4-Dinitrotoluene	- :	3.33	:	ND	:	2.18:	65:	2.43	: 73	: 11	: 47	:	28-89
SAMPLE NO	:Pyrene	- :	3.33	:	ND	:	1.54:	46:	1.83	: 55	: 17	: 36	:	35-142
	:N-Nitroso Di-n-Propylamine	_:	3.33 .	:	ND	:	1.80	54:	2.35	: 71	: 27	: 38	:	41-126
: 88010186	:1,4-Dichlorobenzene	_:	3.33	:	ND	:	1.59	: 48:	2.24	: 67	: 34*	: 27	:	28-104
:	:	_:		_:_		_:_	:	::		:	:		_:	
ACID	: Pentachlorophenol	_:	6.67	- :	ND	-:	5.27	79 :	6.10	: 91	: 15	: 15	_:	17-109
: SMO	:Phenol	<u> </u>	6.67	:	ND	:	3.11:	: 47:	3.90	: 58	: 23	: 23	:	26-90
:SAMPLE NO	: 2-Chlorophenol	- :	6.67	:	ND	:	2.90	: 43:	3.90	: 58	: 29	: 29	:	25-102
:	:4-Chloro-3-Methylphenol	<u> </u>	6.67	:	ND	:	4.23	: 63:	4.93	: 74	: 15	: 15	:	26- 103
: 88010186	:4-Nitrophenol	_ :	6.67	:	ND	:	4.83	: 72:	5.23	: 78	: 8	: 8	:	11-114
:	:	- :		:		:	_ :	::		:	:	:	_:	

Date analyzed: 2-08-88

The quality control set was reextracted and reanalyzed; relative percent differences are within the PA recommended criteria. Please see QC report number BNA-S-0011Re-88.

BLANK SUMMARY

31ank Summary for Samples: 88010186 - 88010195

Date analyzed: 2-08-88

Compound

Quantity

Di-n-butyl phthalate

3.97

1.1

Bis(2-ethyl hexyl)phthalate

OTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

Asterisked values are outside of EPA QC limits

^{**} ND = Not Detected

QUALITY CONTROL REPORT EPA METHOD 625/8270 MATRIX: SOIL

:: ES Atlanta/Volk Field AFB

Job No.: AT077

Jimmy Duncan

Address: 57 Executive Park South,

QC Report No.: BNA-S-0012Re-88 Date Reported: 3/15/88

N.E., Suite 590

Laboratory Supervisor Approval:

Atlanta, GA 30329

C Report for Samples: 88010196 - 88010199

NIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

: FRACTION	: COMPOUND	:CON	C. SPIKE									-	-	LIMITS*
·	-: 	_:	_ADDED	-::			_				-		_	RECOVERY
:	:1,2,4-Trichlorobenzene	_ :	3.33	:	ND *	-			2.01:				_	38-107
: B/N	:Acenaphthene	:	3.33	:	ND	:	2.04:	61:	1.93:	58:	6:	19	:	31-137
: SMO	:2,4-Dinitrotoluene	<u>_</u> :	3.33	:	ND	:	2.46:	74:	2.56:	77:	4:	47	:	28-89
:SAMPLE NO	:Pyrene	_:	3.33	:	ND	:	2.17:	65:	2.43:	73:	11:	36	:	35-142
:	:N-Nitroso Di-n-Propylamine	_:	3.33	:	ND	:	2.38:	71:	2.38:	71:	0:	38	:	41-126
: 88010196Re	e:1,4-Dichlorobenzene	<u>_</u> :	3.33	:	ND	:	2.17:	65:	2.07:	62:	5:	27	:	28-104
: <u></u>	:	:		_:_		_:	:	:					_: ₋	
: ACID	:Pentachlorophenol	_:	6.67	:	ND	:	4.67:	70:	4.77:	72:	2:	47	:	17-109
: SMO	:Phenol	_:	6.67	:	ND	:	4.37:	66:	3.63:	54:	18:	35	:	26-90
:SAMPLE NO	:2-Chlorophenol	- :	6.67	:	ND	:	4.17:	62:	3.77:	56:	10:	50	:	25-102
:	:4-Chloro-3-Methylphenol	<u> </u>	6.67	:	ND	:	4.20:	63:	3.13:	42:	29:	33	:	26-103
: 88010196Re	:4-Nitrophenol	_ :	6.67	:	ND	:	4.60:	69:	4.57:	68:	1:	50	:	11-114
:	:	:		_:		_:	:	:	:	:	:		_:_	

Date analyzed: 2-29-88

Asterisked values are outside of EPA QC limits

** ND = Not Detected

BLANK SUMMARY

31ank Summary for Samples: 88010196 - 88010199

Date analyzed: 2-29-88

Compound

Quantity

None Found

IOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

Revised Report - 3-30-88

lient: ES Atlanta/Volk Field AFB

Job No.:

AT077

ttn: Jimmy Duncan

idress: 57 Executive Park South,

N.E., Suite 590 Atlanta, GA 30329 QC Report No.: BNA-S-0012-88

Date Reported: 3/15/88

Laboratory Supervisor Approval:

SUMBA TO

C Report for Samples: 88010196 - 88010199

NIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	: COMPOUND		SPIKE		AMPL: ESUL							~	LIMITS*
	:1,2,4-Trichlorobenzene		3.33	- :``						56:12	-	_	38-107
B/N	:Acenaphthene	- :	3.33	:	ND					53: 2		•	31-137
SMO	:2,4-Dinitrotoluene	<u> </u>	3.33	:	ND	:	2.22:	67:	2.16:	65: 3	: 47	, :	28-89
SAMPLE NO	:Pyrene	_ : :	3.33	:	ND	:	1.46:	44:	1.50:	45: 3	: 36	5 :	35-142
•	:N-Nitroso Di-n-Propylamine	_ : :	3.33	:	ND	:	2.99:	90:	1.88:	56:464	: 38	3 :	41-126
88010196	:1,4-Dichlorobenzene	_ : :	3.33	:	ND	:	1.91:	57:	1.75:	53: 9	: 2	7 :	28-104
	:	_:		_:_		_:_	:	:	:	:	:	_:	
ACID	:Pentachlorophenol	_:	5.67	-; -	ИD	-: ⁻	6.07:	91:	3.47:	82:55*	4	7 :	17-109
SMO	:Phenol	<u>_</u> : (5.67	:	ND	:	3.20:	48:	3.07:	46: 4	: 35	; :	26-90
SAMPLE NO	:2-Chlorophenol	_: (5.67	:	ND	:	3.57:	54:	3.02:	45:17	: 50) :	25-102
	:4-Chloro-3-Methylphenol	<u> </u>	5.67	:	ND	:	4.13:	62:	3.83:	57: 8	: 33	3 :	26-103
88010196	:4-Nitrophenol	<u>_</u> :	5.67	:	ND	:	5.20:	78:	4.43:	66:16	: 50) :	11-114
	·	_ :		:		:	:	:	:	:	:	:	

ate analyzed: 2-09-88

Asterisked values are outside of EPA QC limits

* ND = Not Detected

he quality control set was reextracted and reanalyzed; relative percent differences are within the PA criteria. Please see QC report number BNA-S-0012Re-88.

BLANK SUMMARY

lank Summary for Samples: 88010196 - 88010199

Date analyzed: 2-08-88

Compound

Quantity

Di-n-butyl phthalate

Bis(2-ethyl hexyl)phthalate

3.97

1.1

OTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

74.3.5

Client: ES Atlanta/Volk Field AFB

Job No.: AT077

Attn: Dan Lane

.

Address: 57 Executive Park South,

QC Report No.: BNA-S-0013-88
Date Reported: 3/15/88

N.E., Suite 590 Atlanta, GA 30329 Laboratory Supervisor Approval:

QC Report for Samples: 88010211 - 88010220

RUBINET.

UNIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	: COMPOUND	: CO1	NC. SPIKE ADDED				CONC.:					_	C LIMITS :
	:1,2,4-Trichlorobenzene	-:-	— _{3.33} —	- :	ND *	• : •	2.09:	63:	2.24	: 67:	7:	_ 23_	: 38-107
B/N	:Acenaphthene	- :	3.33	:	ND	:	2.11:	63:	2.06	: 62:	2:	19	: 31-137
SMO	:2,4-Dinitrotoluene	- :	3.33	:	ND	:	2.51:	75:	2.63	: 79:	5:	47	: 28-89
SAMPLE NO	:Pyrene	- :	3.33	:	ND	:	2.28:	68:	2.19	: 66:	4:	36	: 35-142
	:N-Nitroso Di-n-Propylamine	- :	3.33	:	ND	:	1.92:	58:	2.13	: 64:	10:	38	: 41-126
88010220	:1,4-Dichlorobenzene	<u> </u>	3.33	:	ND	:	2.03:	61:	2.12	: 64:	4:	27	: 28-104
ACID	: Pentachlorophenol	— <u>:</u> —	6.67	-	ND	-:-	4.73:	71:		73		47	: 17-109
SMO	:Phenol	_:	6.67	:	ND		3.53:						: 26-90
SAMPLE NO	:2-Chlorophenol	_:	6.67	:	ND	:	3.67:	55:	3.87	: 58:	5:	50	: 25-102
1	:4-Chloro-3-Methylphenol	_:	6.67	:	ND	:	3.70:	55:	3.24	: 49:	13:	33	: 26-103
88010220	:4-Nitrophenol	_ :	6.67	:	ND	:	4.63:	69: :		-	14:		: 11-114 :

Date analyzed: 3-01-88

* Asterisked values are outside of EPA QC limits

** ND - Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88010211 - 88010220 Date analyzed: 2-19-88

Compound

Quantity

None Found

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

174.3.1

QUALITY CONTROL REPORT EPA METHOD 625/8270 MATRIX: SOIL

Client: ES Atlanta/Volk AFB

Job No.: AT077

Attn: Dan

Dan Lane

QC Report No.: BNA-S-0016-88

Address: 57 Executive Park South,

Date Reported: 5/11/88

N.E., Suite 590 Atlanta, GA 30329 Laboratory Supervisor Approval:

NWBuston

QC Report for Samples: 88010204-0210

UNIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

: FRACTION	: COMPOUND	:CONC. SPIKE : ADDED											-	LIMITS*
:	:1,2,4-Trichlorobenzene	3.33	:	ND **	' : ⁻	2.26:	68:	T2.13	: 64	l: 6	· :	23	-:	38-107
: B/N	:Acenaphthene	: 3.33	:	ND	:	2.00:	60:	2.04:	: 61	: 2	: :	19	:	31-137
: SMO	:2,4-Dinitrotoluene	: 3.33	:	ND	:	2.35:	70:	2.38	: 72	2: 2	: :	47	:	28-89
:SAMPLE NO	:Pyrene	_: 3.33	:	ND	:	1.54:	46:	1.60:	: 48	9: 8	:	36	:	35-142
:	:N-Nitroso Di-n-Propylamine	_: 3 .33	:	ND	:	2.10:	63:	1.87:	: 5€	:11	:	38	:	41-126
: 88010204	:1,4-Dichlorobenzene	_: 3.33	:	ND	:	2.08:	62:	1.83:	55	: 13	:	27	:	28-104
:	:	:	:_		:	:	:	:	·	:	_:_		_:_	
: ACID	:Pentachlorophenol	: 6.67	:	ND	:	4.47:	67:	4.87:	73	: 8	:	47	:	17-109
: SMO	:Phenol	: 6.67	:	ND	:	3.93:	59:	3.53:	53	:11	:	35	:	26-90
:SAMPLE NO	:2-Chlorophenol	: 6.67	:	ND	:	3.47:	62:	3.40:	5 1	: 2	:	50	:	25-102
:	:4-Chloro-3-Methylphenol	: 6.67	:	ND	:	3.87:	58:	4.10:	62	: 6	:	33	:	26-103
: 88010204	:4-Nitrophenol	: 6.67	:	ND	:	5.70:	86:	5.47:	82	: 4	:	50	:	11-114
:	:	:	:_		:	:	:	:	·	:	_:		_:_	

Date analyzed: 2/19/88

* Asterisked values are outside of EPA QC limits

** ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88010204-0210

Date analyzed: 2/19/88

Compound

Quantity

None detected

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

181.16.2

QUALITY CONTROL REPORT EPA METHOD 625/8270 MATRIX: SOIL

Client: ES Atlanta/Volk AFB

tten w/ voir aid

Attn: Dan Lane

Address: 57 Executive Park South,

N.E., Suite 590 Atlanta, GA 30329

QC Report for Samples: 88020289-0300

UNIT: mg/Kg

Job No.: AT077

QC Report No.: BNA-S-0017-88 Date Reported: 5/11/88

Laboratory Supervisor Approval:

AWButton

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	: COMPOUND	:CON	C. SPIKE												~	LIMITS
	<u>:</u>	_:	_ADDED	_:R	ESUL	ַנ: <u>י</u>	_MS	:	REC	:_MSD_:	:REC	::R	PD:	_RPD	<u>'_</u> :'	RECOVERY
	:1,2,4-Trichlorobenzene	_:	3.33	:	ND **	٠: '	2.	48:	74	2.45	: 74	l :	1 :	_ 23	:	38-107
B/N	:Acenaphthene	_:	3.33	:	ND	:	2.	54:	76	: 2.51:	. 75	; :	1 :	19	:	31-137
SMO	:2,4-Dinitrotoluene	<u>_</u> :	3.33	:	ND	:	١.	32:	40	: 1.47:	: 44	1:1	1 :	47	:	28-89
SAMPLE NO	: Pyrene	- :	3.33	:	ND	:	4.	14:	124	: 4.36	: 131	1:	5 :	36	· :	35-142
	:N-Nitroso Di-n-Propylamine	- :	3.33	:	ND	:	1.	96:	: 59	: 1.96	: 59) :	0 :	38	:	41-126
88020289	:1,4-Dichlorobenzene	- :	3.33	:	ND	:	2.	19:	: 66	2.20	: 66	:	0 :	27	:	28-104
	:	- :		:		:		:	:	: :	:	:	:		:	
ACID	:Pentachlorophenol	_:	6.67	:-	ND	:	5.	01:	75	5.13	: 77	i:-	2 :	47	- :	17-109
SMO	:Phenol	- :	6.67	:	ND	:	3.	27 :	49:	3.31	: 50):	1 :	35	:	26-90
SAMPLE NO	:2-Chlorophenol	- :	6.67	:	ND	:	3.	58:	54:	3.59	54	: (0 :	50	:	25-102
	:4-Chloro-3-Methylphenol	- :	6.67	:	ND	:	2.	46 :	37	2.24	34	i: '	9 :	33	:	26-103
88020289	:4-Nitrophenol	- :	6.67	:	ND	:	5.	18:	78	4.87	: 43	:	6 :	50	:	11-114
	:	- :		:		:		:	: :		•	•	:		:	

Date analyzed: 3/08/88

* Asterisked values are outside of EPA QC limits

** ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88020289-0300

Date analyzed: 3/08/88

Compound

Quantity

None detected

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

QUALITY CONTROL REPORT EPA METHOD 625/8270 MATRIX: SOIL

Client: ES Atlanta/Volk AFB

Job No.: AT077

Attn: Dan Lane

Address: 57 Executive Park South,

N.E., Suite 590

Date Reported: 4/14/88

Atlanta, GA 30329

Laboratory Supervisor Approval:

QC Report No.: BNA-S-0018-88

QC Report for Samples: 88010211-0212, 88010214-0220

UNIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	: COMPOUND		. SPIKE ADDED											_	-	LIMITS RECOVER
	:1,2,4-Trichlorobenzene	_:	3.33	-:	ND*	• :	2.09	: 63	: 2.	24	67:	7	:-	23	-:	38-107
B/N	:Acenaphthene	- : :	3.33	:	ND	:	2.11	: 63	: 2.	06:	62:	2	:	19	:	31-137
SMO	: 2,4-Dinitrotoluene	- : :	3.33	:	ND	:	2.51	: 75	: 2.	63	79:	5	:	47	:	28-89
SAMPLE NO	: Pyrene	- : .	3.33	:	ND	:	2.28	: 68	: 2.	19:	: 66:	4	:	36	:	35-142
	:N-Nitroso Di-n-Propylamine	_: :	3.33	:	ND	:	1.92	: 58	: 2.	13:	64:	10	:	38	:	41-126
88010220	:1,4-Dichlorobenzene	_: :	3.33	:	ND	:	2.03	: 61	: 2.	12:	64:	4	:	27	:	28-104
	:	_:		_:_		_ : .		:	:	:	::		:		:_	
ACID	:Pentachlorophenol	_:	6.67	:	ИD	:	4.73	: 71	: 4.	87	73:	3	:	47	:	17-109
SMO	:Phenol	_; (6.67	:	ND	:	3.53	: 53	: 3.	37 :	51:	5	:	35	:	26-90
SAMPLE NO	:2-Chlorophenol	⁻: ′	6.67	:	ND	:	3.87	: 58	: 3.	87	: 58:	0	:	50	:	25-102
	:4-Chloro-3-Methylphenol	- :	6.67	:	ND	:	3.70	: 55	: 3.	24	: 49:	13	:	33	:	26-103
88010220	:4-Nitrophenol	_:	6.67	:	ND	:	4.63	: 69	: 5.	33:	: 80:	14	:	50	:	11-114
	:	:		_:_		:		:	:	;	: :		:		:_	

Date analyzed: 3/01/88

* Asterisked values are outside of EPA QC limits

** ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88010211-00212, 88010-00214-0220

Date analyzed: 2/19/88

Compound

Quantity

None found

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

177.43.1

Client: ES Atlanta/Volk Field AFB

Attn: Jimmy Duncan

Address: 57 Executive Park South,

N.E., Suite 590 Atlanta, GA 30329

QC Report for Samples: 88020371-0378

UNIT: ug/Kg

Job No.: AT064

QC Report No.: BNA-S-0021Re-88

Date Reported: 4-28-88

Laboratory Supervisor Approval:

MuBu to

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

Date analyzed: 3-21-88

FRACTION	: COMPOUND	:CONC	. SPIKE													
	<u>:</u>	:	_ADDED	_ : R	ESUL:	r:_	_MS	:RE	C:_	MSD_	:RE	C:	RPD:	_R PD	·_ : F	RECOVERY
	:1,2,4-Trichlorobenzene	_:	3330	-:	ИD	:	1900	: 57	:	2240	: 67	:	16 :	_ 23	_:	38-107
B/N	:Acenaphthene	_:	3330	:	ND	:	2210	: 66	:	2380	: 72	:	7 :	19	:	31-137
SMO	:2,4-Dinitrotoluene	<u>_</u> :	3330	:	ND	:	2630	: 79	:	2580	: 78	:	2 :	47	:	28-89
SAMPLE NO	:Pyrene	- :	3330	:	ND	:	2660	:80	:	2410	: 72	:	10 :	36	:	35-142
:	:N-Nitroso Di-n-Propylamine	- :	3330	:	ND	:	2220	: 67	:	2570	: 77	:	15 :	38	:	41-126
88020371Re	:1,4-Dichlorobenzene	_ :	3330	:	ND	:	1980	: 60	:	2370		:	18 :	27	· :	28-104
	: 	_:		-:_		_∶.		:	_:_		:	_:.	:		_:_	
ACID	:Pentachlorophenol	:	6670	:	ND	:	6870	: 10	3:	6730	: 10	1:	2:	47	;	17-109
SMO	:Phenol	_:	6670	:	ND	:	3990	:60	:	4460	:67	:	11:	35	:	26-90
SAMPLE NO	:2-Chlorophenol	_:	6670	:	2.3	:	3980	: 60	:	4680	: 70	:	16:	50	:	25-102
:	:4-Chloro-3-Methylphenol	- :	6670	:	ND	:	4410	:66	:	4840	:73	:	9:	33	:	26-103
88020371Re	:4-Nitrophenol	_ :	6670	:	ND	:	5530	:83	:	5090	: 76	:	8 :	50	:	11-114
	:	_:		:		:		:	:		:	:	:		:	

hate analyzed: 3-28-88

BLANK SUMMARY

Blank Summary for Samples: 88020371-0378

CompoundQuantityDiethylphthalate68.9Di-n-butylphthalate2910Bis-2-ethylphthalate78.6

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

179.28.3

^{&#}x27; Asterisked values are outside of EPA QC limits

^{**} ND = Not Detected

Client: ES Atlanta/Volk Field AFB

Job No.:

AT064

Attn:

Jimmy Duncan

Address: 57 Executive Park South,

QC Report No.: BNA-S-0021-88 Date Reported: 4-28-88

N.E., Suite 590

Laboratory Supervisor Approval:

Atlanta, GA 30329

UNIT: ug/Kg

QC Report for Samples: 88020371-0378

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	: COMPOUND	:CO	NC. SPIKE				CONC. MS	-								_	LIMITS* RECOVERY
	:1,2,4-Trichlorobenzene	_:	3330	:	ND	:	1240	ī: 3	7*:	12	50:	: 38	:	1 :	_ 23	- :	38-107
B/N	:Acenaphthene	<u> </u>	3330	:	ND	:	1150	: 3	4 :	110	60:	: 35	:	1 :	19	:	31-137
SMO	:2,4-Dinitrotoluene	- :	3330	:	ND	:	1620	: 4	9:	13	70:	41	:	17:	47	•	28-89
SAMPLE NO	:Pyrene	-:	3330	:	ND	:	1420	: 4	3 :	8	85	: 27	•:	46 * :	36	:	35-142
	:N-Nitroso Di-n-Propylamine	- -:	3330	:	ND	:	1114	1:3	3*:	12	50	: 38	* :	12:	38	:	41-126
88020371	:1,4-Dichlorobenzene		3330	:	ND	:	1200		6:	12		: 39			27	' :	28-104
ACID	: :Pentachlorophenol	-¦	6670	-:-	ND	- :	3020	: 3 : 4	<u>-</u> :	26	_	40	- :		47	, -	17-109
SMO	:Phenol	- -:	6670	:	ND	:	1550):2	3*:	17	60	: 26	:	13:	35	;	26-90
SAMPLE NO	:2-Chlorophenol	- .	6670	:	ND	:	1900):2	8 :	21	30	: 32	:	11:	50) ;	25-102
	:4-Chloro-3-Methylphenol	- -:	6670	:	ND	:	828	3:1	2*:	9	24	: 14	•:	11:	33	:	26-103
88020371	:4-Nitrophenol	_:	6670	:	ND	:	3070	: 4	6 :	28	70	: 43	:	7 :	50) :	11-114
1	:	:		:		:		:	:			:	_∶	:		_:	

Date analyzed: 3-14-88

The quality control set was reextracted and reanalyzed. The resulting QC results are within the EPA criteria. Please see report number BNA-S-0021RE-88.

BLANK SUMMARY

Blank Summary for Samples: 88020371-0378

Date analyzed: 3-14-88

Compound Di-n-butylphthalate Quantity 370

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

179.28.2

Asterisked values are outside of EPA QC limits

^{**} ND = Not Detected

AT077 Job No.:

ES Atlanta Jimmy Duncan Client: Attn: Address:

57 Executive Park South N. E. - Suite 590 Atlanta, Ga. 30329

Laboratory Supervisor Approval:

9-27-88

Date Reported:

Volk Field AFB Project:

Nitro- 2-Fluoro- 4,4'-Dibromo- phenol-d5 2-Fluoro- benzene-d5 biphenyl biphenyl phenol 23-120 30-115 18-137 24-113 25-121 52 50 68 46 37 69 66 91 63 52 69 62 88 59 44 74 90 101 71 64 72 73 89 56 44 72 73 89 56 44 43 48 82 38 28 43 48 82 38 28 43 48 82 38 28 55 59 78 41 25 55 59 78 4 8 56 66 60 60 57 50 77 48 65 77 48 8 8 60							
benzene-d5 biphenyl biphenyl phenol 23-120 30-115 18-137 24-113 25-121 23-120 30-115 18-137 24-113 25-121 MS 69 66 91 63 52-121 MS 68 66 91 63 52-121 MS 62 88 59 44 MSD 65 61 101 71 64 72 73 89 56 47 7 47 52 55 78 78 47 7 47 55 55 73 33 16 8 55 59 77 41 25 55 56 66 60 60 57 50 8 66 60 60 57 50 8 77 48 65 73 73 8 77 48 65	Sample No.	Nitro-	2-Fluoro-	4,4'-Dibromo-	phenol-d5	2-Fluoro-	2,4,6-Tribromo-
23–120 30–115 18–137 24–113 25–121 MS 68 66 91 63 52 69 66 91 63 52 MSD 65 61 88 59 44 MSD 65 61 88 59 44 74 90 101 77 64 72 73 89 56 47 55 55 78 78 71 64 43 48 82 38 28 55 65 77 13 31 13 * 8 56 60 60 60 57 50 8 77 70 66 58 8 80 105 58 68		penzene-d5	biphenyl	biphenyl		phenol	phenol
MS 52 50 68 46 37 69 66 91 63 52 69 66 91 63 52 MSD 65 61 85 54 44 MSD 65 61 85 54 44 44 MSD 65 61 85 54 44 44 44 44 44 44 44 44 44 44 44 44 8 44 44 8 44 44 8 44 44 8 44		23-120	30-115	18-137	24-113	25-121	19–122
MS 68 66 91 63 52 MSD 65 61 88 59 44 MSD 65 61 85 54 44 74 90 101 71 64 72 73 89 56 47 72 73 89 56 47 73 11 13 * 55 65 73 31 13 * 55 65 77 33 16 * 8 8 85 4 4 * 8 * 8 65 77 70 66 58 8 80 105 58 78 8 86 77 70 66 73 78 77 48 65 8 86 77 70 66 73 78 78 78 78 8 8 85 79 78 8 8 85 79 78 8 8 85 79 78 8 8 85 77 50 60 8 8 85 77 50 65 8 8 85 77 77 70 66 7 7 7 8 86 7 7 7 8 86 7 7 7 8 86 7 8 8 86 7 8 8 86 7 8 8 86	Blank	52	50	89	917	37	911
MSD 68 62 88 59 44 MSD 65 61 85 54 44 MSD 65 61 85 54 44 72 73 89 56 47 7	88010204	69	99	91	63	52	55
MSD 65 61 85 54 44 72 73 89 56 47 72 73 89 56 47 52 55 78 7 * 7 * 43 48 82 38 28 43 48 82 38 28 55 59 78 41 25 55 58 79 33 16 * 56 60 60 57 50 8 77 70 66 58 8 77 70 66 58 8 77 48 65 78 8 77 48 65 73 8 80 105 58 86 73		89	62	88	59	ħ ħ	817
74 90 101 71 64 72 73 89 56 47 52 55 78 7 * 7 * 43 48 82 38 28 43 48 82 38 28 55 65 73 31 13 * 55 59 78 41 25 56 68 85 4 * 8 * 56 60 60 57 50 R 77 48 65 78 R 80 105 58 86		65	61	85	54	ħ ħ	28
72 73 89 56 47 52 55 78 7 * 7 * 7 * 7 * 7 * 7 * 7 * 7 * 7 * 7 *	88010205	ħĹ	06	101	7.1	64	80
52 55 7 * 7 * 43 48 82 38 28 43 48 82 38 28 55 65 73 31 13 * 55 59 78 41 25 56 68 85 4 * 8 * 8 60 60 57 50 8 77 70 66 58 8 77 48 65 73 8 80 105 58 86 73	88010206	72	73	89	26	L tr	31
43 48 82 38 28 55 65 73 31 13 * 55 59 78 41 25 58 68 85 4 * 8 * 56 60 60 57 50 R 77 70 66 58 R 77 48 65 73 R 80 105 58 86	88010207	52	55	78	* L	* _	• 0
55 65 73 31 13 ** 55 59 78 41 25 56 58 79 33 16 ** 56 60 60 57 50 R 77 70 66 58 R 77 48 65 78 65 R 80 105 58 86 73	88010208	£ 1 7	84	82	38	28	53
55 59 78 41 25 55 58 79 33 16 * 58 68 85 4 * 8 * 56 60 60 57 50 R 77 70 66 58 R 77 48 65 78 65 R 80 105 58 86 73	88010209	55	65	73	31	13 *	18 #
55 58 79 33 16 * 58 68 85 4 * 8 * 56 60 60 57 50 R 77 70 66 58 R 77 48 65 78 65 R 80 105 58 86 73	88010210	55	59	78	t 1	25	35
58 68 85 44 8 * 56 60 60 57 50 R 77 70 66 58 R 77 48 65 78 65 R 80 105 58 86 73	88010211	55	28	79	33	16 #	31
56 60 60 57 50 1 R 77 70 66 58 1 R 77 48 65 78 65 1 R 80 105 58 86 73	88010212	28	89	85	*	*	•
R	Blank	56	9	09	57	20	58
IR 77 48 65 78 65 18 85 73	88010207 R	65	77	70	99	58	69
R 80 105 58 86 73	_	11	8 1	65	78	65	51
	88010212 R	80	105	28	98	73	55

* Values are outside EPA QC limits. R Re-extracted sample results.

AT077 Job No.: ES Atlanta Client:

Jimmy Duncan 57 Executive Park South N. E. - Suite 590 Atlanta, Ga. 30329 Address: Attn:

Volk Field AFB

Project:

9-27-88

Date Reported:

Laboratory Supervisor Approval:

Sample No.	Nitro-	2-Fluoro-	4,4'-Dibromo-	phenol-d5	2-Fluoro-	2,4,6-Tribromo-
	benzene-d5 23-120	biphenyl 30-115	biphenyl 18-137	24-113	phenol 25-121	phenol 19-122
Blank	52	50	68		37	911
88010214	99	57	80	45	32	37
88010215	# 2	19	81	58	179	53
88010216	61	55	89	01	45	52
88010217	99	61	7.1	37	147	57
88010218	88	70	83	22	61	61
88010219	72	†9	89	53	54	55
88010220	118	110	151	72	26	87
88010220 MS	72	89	98	99	9ħ	54
88010220 MSD	73	69	86	51	77	15

^{*} Values are outside EPA QC limits.

Date Reported: AT077 Job No.:

9-27-88

Jimmy Duncan ES Atlanta Client: Attn: Address:

57 Executive Park South N. E. - Suite 590 Atlanta, Ga. 30329

Volk Field AFB

Project:

Laboratory Supervisor Approval:

	Sample No.	Nitro- benzene-d5	2-Fluoro- biphenyl	<pre>4,4'-Dibromo- biphenyl</pre>	phenol-d5	2-Fluoro- phenol	2,4,6-Tribromophenol	
		23-120	30-115	18-137	24-113	25–121	19–122	
_	Blank	69	62	7.1	09	Ltr	15	ĺ
	88010186	61	55	79	63	20	53	
F	88010186 MS	70	58	72	ħ9	53	53	
_ -5	88010186 MSD	69	29	69	63	55	53	
— 6	88010187	20	611	ħ6	42	32	62	
	88010188	D.	D D	Dľ.	Dľ	DF	DΓ	
	88010189	JC	DF	70	DF	DΓ	겁	
	88010190	89	99	63	817	59	Lh	
	88010191	89	19	75	38	31	54	
	88010192	99	73	87	35	32	89	
_	88010193	65	† 9	96	611	017	55	
	88010194	53	51	91	817	45	99	
	88010195	63	29	93	55	17 17	99	
	88010196	92	62	91	09	617	52	
	88010196 MS	92	63	7.7	99	57	50	
	88010196 MSD	1 /	62	79	99	ከተ	84	
	88010197	11	72	16	27	54	70	
	88010198	77	100	95	13 #	65	103	
	88010199	26	73	82	31	T #	73	

Values are outside EPA QC limits. DL Diluted out.

9-27-88

Date Reported:

AT077 Job No.:

ES Atlanta

Client: Attn: Address:

'immy Duncan 57 Executive Park South N. E. - Suite 590 Atlanta, Ga. 30329

Laboratory Supervisor Approval:

Volk Field AFB Project:

	Sample No.	Nitro-	2-Fluoro-	4,4'-Dibromo-	phenol-d5	2-Fluoro-	2,4,6-Tribromo-
		23–120	30-115	18–137	24-113	25–121	19–122
_	Blank	09	7.1	66	61	n n	63
	88020289	84	24	77	35	16 #	27
		09	29	82	24	31	011
_	88020289 MSD	51	55	27	41	28	11
_	88020290	9	80	61	52	017	56
_	88020291	45	61	80	39	33	58
_	88020292	59	65	83	54	43	611
	88020293	53	7.1	65	43	25	38
	88020294	11.7	61	09	20	43	36
	88020295	79	83	9††	51	37	31
	88020296	39	53	51	38	56	27
	88020297	27	89	26	51	39	27
	88020298	64	63	09	8₩	39	36
	88020299	29	65	72	64	34	38
	88020300	59	99	7 8	54	37	38

F-57

^{*} Values are outside EPA QC limits.

AT077 Job No.:

ES Atlanta

Client: Attn: Address:

Jimmy Duncan 57 Executive Park South N. E. - Suite 590 Atlanta, Ga. 30329

Volk Field AFB Project:

Laboratory Supervisor Approval:

9-27-88

Date Reported:

	Sample No.	Nitro-	2-Fluoro-	4,4'-Dibromo-	pheno1-d5	2-Fluoro-	2,4,6-Tribromo-	
		penzene-d2	biphenyl	biphenyl		phenol	phenol	
		23-120	30-115	18–137	24-113	25–121	19–122	
	88020371	14	917	617	38	31	34	
_	88020371 MS	88	017	52	25	18 *	21	
 ?-!	88020371 MSD	O 1	75 115	64	29	21 #	20	
	88020372	33	41	45	5₫	* 6	13 *	
_	88020372 R	26	61	98	26	817	450	
	88020373	34	32	36	58	21 *	20	
	88020374	34	34	39	34	25	23	
	88020375	01	39	41	33	25 #	20	
	88020376	38	36	35	36	27	23	
	88020377	32	33	34	21 *	*	* 6	
	88020378	37	37	41	33	# ħZ	23	
	Blank	38	017	911	34	30	59	

* Values are outside EPA QC limits. Re-extracted sample results.

Soil Surrogate Percent Recovery Summary

AT077 3-10-88

Job Number: Date Reported:

Client: ES Atlanta/Volk AFB

Attn: Jimmy Duncan Address: Suite 590

57 Executive Park Atlanta, GA 30329

Sample T	foluene d-8 [61-117)	Toluene Bromo-fluoro 1,2-Dichld-8 benzene roethane (61-117) (74-121)	1,2-Dichlo roethane d4 (70-121)	Nitro- benzene (23-120)	Nitro- 2-fluoro- benzene biphenyl (23-120) (30-115)	4,4'Dibromo- Phenol biphenyl d-5 (18-137) (24-113)	- Phenol d-5 (24-113)		2-fluoro 2,4,6-tri- phenol bromophenol 25-121) (19-122)	Dibutyl- chlordate (20-150)**
88010195	A N	AN AN	I I I I I I I I I I I I I I I I I I I	63	59	93	55	44	99	V N
88010196	X	¥X	NA NA	61	28	111	49	4	62	N
88010196MS		¥.	NA	63	28	06	33	46	68	NA
88010196MSD		Z	NA	09	51	06	45	45	99	N A
88010197		KN	NA	77	72	97	27	54	70	NA
88010198	S.	N.	K.	77	100	95	13*	65	103	NA
88010199	×	Y.	NA	26	73	82	31	41	73	NA
BLANK	NA	V N	N.	69	62	71	09	47	54	NA .
* Values ar	re outs	* Values are outside of contract required	t required oc	OC limits	Volatile:	1	out of	NA ; ou	outside of QC limits	imits.
** Advisory limits only	ry limit	s only	•		Semivolatile:	le: 1	out of	48 ;	utside of QC 1	limits.
NA = Not	policab	NA = Not applicable DL = Diluted out	ed out		Pesticides:	BB: NA	out of		outside of QC limits.	imits.

F-59

Laboratory Supervisor Approval

Soil Surrogate Percent Recovery Summary

3-10-88 AT077

Job Number: Date Reported:

Client: ES Atlanta/Volk AFB

Attn: Jimmy Duncan Address: Suite 590

57 Executive Park Atlanta, GA 30329

88010186 NA NA NA NA 62 63 94 57 46 74 88010186MS NA NA NA NA 71 69 107 61 51 80 88010186MS NA NA NA NA NA 71 69 107 61 51 80 88010187 NA NA NA NA DL NA NA NA NA NA NA NA NA </th <th>Sample No.</th> <th>Toluene d-8 (61-117)</th> <th>Toluene Bromo-fluoro d-8 benzene (61-117) (74-121)</th> <th>1,2-Dichlo roethane d4 (70-121)</th> <th>Nitro- benzene (23-120)</th> <th>2-fluoro- biphenyi (30-115)</th> <th>Terphenyl- Phenol d-14 d-5 (18-137) (24-113)</th> <th>Phenol d-5 (24-113)</th> <th>Phenol 2-fluoro d-5 phenol (24-113) (25-121)</th> <th>2,4,6-tri- bromophenol (19-122)</th> <th>Dibutyl- chlordate (20-150)**</th>	Sample No.	Toluene d-8 (61-117)	Toluene Bromo-fluoro d-8 benzene (61-117) (74-121)	1,2-Dichlo roethane d4 (70-121)	Nitro- benzene (23-120)	2-fluoro- biphenyi (30-115)	Terphenyl- Phenol d-14 d-5 (18-137) (24-113)	Phenol d-5 (24-113)	Phenol 2-fluoro d-5 phenol (24-113) (25-121)	2,4,6-tri- bromophenol (19-122)	Dibutyl- chlordate (20-150)**
88010186MS NA NA NA 52 50 93 45 36 66 88010186MSD NA NA NA 71 69 107 61 51 80 88010187 NA NA NA DL D	88010186		NA	NA	62	63	94	57	46	74	NA NA
MSD NA NA 71 69 107 61 51 80 NA NA NA 50 49 94 42 32 62 NA NA NA DL DL DL DL DL DL DL NA NA NA DL DL </td <td>88010186</td> <td></td> <td>NA</td> <td>NA</td> <td>52</td> <td>20</td> <td>93</td> <td>45</td> <td>36</td> <td>99</td> <td>NA</td>	88010186		NA	NA	52	20	93	45	36	99	NA
88010187 NA NA 50 49 94 42 32 62 88010188 NA NA NA DL			NA	NA	7.1	69	107	61	51	80	NA
88010188 NA NA NA DL <			NA	NA	20	49	94	42	32	62	NA
NA NA NA DL A7 A7 A8 A7 A8 A9 A9<			NA	NA	DĽ	DI	DL	DL	DI	D T	NA
NA NA NA 68 66 63 48 29 47 NA NA NA NA 66 73 87 35 31 54 NA NA NA NA 66 73 87 35 68 NA NA NA NA 65 64 96 49 40 55 NA NA NA NA 48 45 66 are outside of contract required QC limits Volatile: NA 0ut of of NA; outside of QC limits applicable DL = Diluted out Pesticides: NA NA out of NA; outside of QC limits	88010189		NA	NA	DI	Dľ	DL	DL	DI	DT	NA
NA NA 68 67 75 38 31 54 NA NA 66 73 87 35 32 68 NA NA NA 65 64 96 49 40 55 NA NA NA NA 45 66 66 66 of contract required QC limits Volatile: NA out of of out of of out of of QC limits 66 coutside of QC limits DL = Diluted out Pesticides: NA out of of NA; outside of OC limits	88010190		NA	NA	68	99	63	48	29	47	NA
NA NA 66 73 87 35 32 68 NA NA 65 64 96 49 40 55 NA NA NA 53 51 91 48 45 66 of contract required QC limits Volatile: NA out of NA; outside of QC limits nly Pesticides: NA out of NA; outside of QC limits	88010191		NA	NA	. 89	29	75	38	31	54	NA
NA NA 65 64 96 49 40 55 NA NA 53 51 91 48 45 66 Out of contract required QC limits	88010192		NA	NA	99	73	87	35	32	89	AN
NA NA Semivolatile: Of contract required QC limits Semivolatile: O out of NA; outside of QC limits DL = Diluted out NA out of NA; outside of QC limits	88010193		NA	N.	65	64	96	49	40	55	NA
of contract required QC limits Volatile: NA out of NA; nly Semivolatile: 0 out of 66; DL = Diluted out of NA;	88010194		NA	NA	53	51	91	48	45	99	NA
nly Semivolatile: 0 out of 66; DL = Diluted out Pesticides: NA out of NA;	* Value	s are outs.	ide of contract	1	limits	Volati		out of	, AN	utside of QC	limits.
DL = Diluted out Pesticides: NA out of NA; outside of OC	** Advis	sory limit.	s only			Semivolati	.e: 0	out of	; 99 	outside of oc	limits.
	NA - Not	t applicab.	le DL = Dilute	ed out		Pesticide	BB: NA	out of	 	outside of OC	limits.

Laboratory Supervisor Approval

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329

Job No.: ATO77

Lab Sample Nos:

88030537-0538, 88030540

QC Report No: PCB-W-0004-88

Spike Duplicates: Blank

Date Analyzed: 3-23-88

Spike:

Blank

Laboratory Supervisor Approval:

Sample Matrix

Water (ug/L)

Dilution Factor:

NA

		Di	plicat	e s	Spi	ke Re	covery		CLP	QC Limits
Compound	Blank	MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	N A	N A	N A	N A	N A	N A	N A	N A	22	40-120
q-BHC (Lindane)	N A	N A	N A	N A	N A	N A	N A	N A	15	56-123
Dieldrin	N A	N A	NA	N A	N A	N A	N A	N A	18	52-126
Endrin	N A	N A	N A	N A	N A	N A	N A	N A	21	56-121
Heptachlor	N A	N A	N A	N A	N A	N A	N A	N A	20	40-131
4.4'-DDT	NA	N A	N A	N A	N A	N A	N A	N A	27	40-131
PCB-1260	ND	0.93	0.88	6	1.0	N A	0.93	93		-

^{*} Asterisked values are outside the CLP QC limits.

ND = Not Detected. NA = Not Applicable.

MS - MSD X 100 MS = Spike Sample (MS + MSD)/2 MSD = Spike Duplica Relative Percent Difference (RPD) MSD = Spike Duplicate

 $= SSR - SR \times 100$ Percent Recovery (PR)

SSR = Spiked Sample Result

SR = Sample Result

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329

Lab Sample Nos:

88030554.

88030565-88030569

Date Reported: 5-19-88

RUBINTE

QC Report No: PCB-W-0006-88

Spike Duplicates: 88030566

Date Analyzed: 3-23-88

Spike:

88030566

Laboratory Supervisor Approval:

Sample Matrix

Water (ug/L)

Dilution Factor:

NA

		Di	uplicat	es	Spi	ke Re	covery		CLP	QC Limits
Compound	Blank	MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	N A	N A	N A	NA	N A	ND	NA	N A	22	40-120
q-BHC (Lindane)	N A	N A	N A	N A	N A	ND	N A	N A	15	56-123
Dieldrin	N A	N A	N A	N A	N A	ND	N A	N A	18	52-126
Endrin	N A	N A	N A	N A	N A	ND	N A	N A	21	56-121
Heptachlor	N A	N A	N A	N A	N A	ND	N A	N A	20	40-131
4.4'-DDT	N A	N A	N A	N A	N A	ND	N A	N A	27	40-131
PCB-1260	ND	1.03	0.99	4	1.0	ND	1.03	103	-	_

^{*} Asterisked values are outside the CLP QC limits.

ND = Not Detected. NA = Not Applicable.

Relative Percent Difference (RPD) = MS - MSD X 100 MS = Spike Sample (MS + MSD)/2MSD = Spike Duplicate

Percent Recovery (PR) = SSR - SR x 100

SSR = Spiked Sample Result SR = Sample Result

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

Job No.: ATO77

Lab Sample Nos:

88030572-88030573,

88030575-88030576

Spike Duplicates: Blank MS

Date Analyzed: 3-24-88

Date Reported: 5-23-88

Spike:

Blank MSD

Laboratory Supervisor Approval:

Sample Matrix

water

QC Report No: PCB-W-0007-88

Water (ug/L)

Dilution Factor:

NA

		Di	uplicat	es	Spi	ke Re	covery		CLP	QC Limits
Compound	Blank	MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	ND	N A	N A	NA	N A	ND	N A	N A	22	40-120
q-BHC (Lindane)	ND	N A	N A	N A	N A	ND	N A	N A	15	56-123
Dieldrin	ND	N A	N A	N A	N A	ND	N A	N A	18	52-126
Endrin	ND	N A	N A	N A	N A	ND	N A	N A	21	56-121
Heptachlor	ND	N A	N A	N A	N A	ND	N A	N A	20	40-131
4 . 4 * - DDT	ND	N A	N A	N A	N A	ND	N A	N A	27	40-131
PCB-1260	ND	0.99	0.87	13	1.0	ND	0.99	99	•	•

Asterisked values are outside the CLP QC limits.

The laboratory control sample is designated as a quality control sample for this batch. Insufficient sample available for QC purpose.

ND = Not Detected. NA = Not Applicable.

Relative Percent Difference (RPD) = MS - MSD X 100 MS = Spike Sample (MS + MSD)/2MSD = Spike Duplicate

Percent Recovery (PR) = $SSR - SR \times 100$

SSR = Spiked Sample Result

SR = Sample Result

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590

Atlanta, G. 30329

Job No.: ATO77

Dilution Factor:

Lab Sample Nos:

88030554, 88030565-0569

Spike Duplicates: 88030566

Spike:

88030566

QC Report No: PCB-W-0009-88

Date Analyzed: 3-23-88 Date Reported: 5-23-88

Laboratory Supervisor Approval:

NA

Sample Matrix

Water (ug/L)

		Di	uplicat	es	Spi	ke Re	covery		CLP	QC Limits
Compound	Blank	MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	ND	ND	ND	NC	N A	ND	NA	N A	22	40-120
q-BHC (Lindane)	ND	ND	ND	NC	N A	ND	N A	N A	15	56-123
Dieldrin	ND	ND	ND	NC	N A	ND	N A	N A	18	52-126
Endrin	ND	ND	ND	NC	N A	ND	N A	N A	21	56-121
Heptachlor	ND	ND	ND	NC	N A	ND	NA	N A	20	40-131
4.4'-DDT	ND	ND	ND	NC	N A	ND	N A	N A	27	40-131
PCB-1260	ND	1.03	0.99	4	1.0	ND	1.03	103	•	-

* Asterisked values are outside the CLP QC limits.

ND = Not Detected. NA = Not Applicable. NC = Not Calculated.

Relative Percent Difference (RPD) = MS - MSD X 100 MS = Spike Sample (MS + MSD)/2MSD = Spike Duplicate

Percent Recovery (PR) = $SSR - SR \times 100$

SSR = Spiked Sample Result

SR = Sample Result

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329

Job No.: AT077

Lab Sample Nos:

88030537, 88030538,

QC Report No: PCB-W-0010-88

Spike Duplicates:

88030540

Blank MS

Date Analyzed: 3-23-88

Spike:

Blank MSD

Date Reported: 5-23-88

Laboratory Supervisor Approval:

Sample Matrix

Water (ug/L)

Dilution Factor:

NA

		D	uplicat	es	Spi	ke Re	covery		CLP	QC Limits
Compound	Blank	MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	ND	ND	ND	N C	N A	ND	N A	N A	22	40-120
q-BHC (Lindane)	ND	ND	ND	NC	N A	ND	N A	N A	15	56-123
Dieldrin	ND	ND	ND	NC	N A	ND	N A	N A	18	52-126
Endrin	ND	ND	ND	NC	N A	ND	N A	N A	21	56-121
Heptachlor	ND	ND	ND	NC	N A	ND	N A	N A	20	40-131
4.4*-DDT	ND	ND	ND	NC	N A	ND	N A	N A	27	40-131
PCB-1260	ND	0.93	0.88	5	1.0	ND	0.93	93		

^{*} Asterisked values are outside the CLP QC limits.

The laboratory control sample is designated as a quality control sample for this batch. Insufficient sample available for QC purpose.

ND = Not Detected. NA = Not Applicable. NC = Not Calculated.

SSR = Spiked Sample Result

Percent Recovery (PR) = $\frac{SSR - SR}{R} \times 100$ SR = Sample Result

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329

Job No.: ATO77

Lab Sample Nos:

88030572, 880300573

88030575, 88030576

Spike Duplicates: Blank MS

Date Analyzed: 3-24-88

Date Reported: 5-23-88

Spike:

Blank MSD

Laboratory Supervisor Approval:

motor

QC Report No: PCB-W-0011-88

Sample Matrix

Water (ug/L)

Dilution Factor:

NA

Compound	Blank	Duplicates			Spike Recovery				CLP	CLP QC Limits	
		MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC	
Aldrin	ND	ND	ND	NC	N A	ND	N A	N A	22	40-120	
q-BHC (Lindane)	ND	ND	ND	NC	N A	ND	N A	N A	15	56-123	
Dieldrin	ND	ND	ND	NC	N A	ND	N A	N A	18	52-126	
Endrin	ND	ND	ND	NC	N A	ND	N A	N A	21	56-121	
Heptachlor	ND	ND	ND	NC	N A	ND	NA	N A	20	40-131	
4,4'-DDT	ND	ND	ND	NC	N A	ND	N A	N A	27	40-131	
PCB-1260	ND	0.99	0.87	13	1.0	ND	0.99	99			

* Asterisked values are outside the CLP QC limits.

The laboratory control sample is designated as a quality control sample for this batch. Insufficient sample available for QC purpose.

ND = Not Detected. NA = Not Applicable. NC = Not Calculated.

Percent Recovery (PR) = $\frac{SSR - SR}{SA}$ x 100

SSR = Spiked Sample Result

SR = Sample Result

PESTICIDE SURROGATE RECOVERY WATER

Job No.:

ATO77

Client:

ES Atlanta

Dan Lane

57 Executive Park South N. E. - Suite 590 Atlanta, Ga. 30329

Date Reported: 9-29-88

Laboratory Supervisor Approval:

Project:

Volk Field AFB

SuBmit

Sample Number	S1 (DBC) 🗱 Sample 1	Number S1 (DBC)%#
Blank	l 98 l	ì
88030522	1 78 1	1
88030527	ł 78 l	1
88030528	l 58 l	1
88030529	l 75 l	1
88030530	184#	1
88030531	l 93 l	1
88030531 MS	100	1
88030531 MSD	1 99	1
88030533	101	1
88030536	142	1
88030539	97	!
Blank	125	
Blank MS	154*	l
Blank MSD	181*	•

ADVISORY QC LIMITS (20-150)

S1 (DBC) = Dibutylchorendate % recovery

= Column to be used to flag recovery values with an asterisk

= Values outside of QC limits

DL = Diluted out

PESTICIDE SURROGATE RECOVERY WATER

Job No.:

AT077

Client:

ES Atlanta

Dan Lane

57 Executive Park South N. E. - Suite 590

Date Reported: 9-29-88

Atlanta, Ga. 30329

Laboratory Supervisor Approval:

Project:

Volk Field AFB

Sample Number	S1 (DBC)%#	Sample Number	S1 (DBC)%#
88030574	1 87	1	1
Blank	1 67	1	1
Blank MS	1 119	1	1
Blank MSD	1 116	1	l
1	1	1	ł
<u> </u>	1	1	l
} •	i	1	ł
ì	i	1	l
	l .	1	l
	į.		!
	•		ļ
•	•	İ	i
f 1	•	!	i
, ,	!	f t	í
	į	1	İ

ADVISORY QC LIMITS (20-150)

S1 (DBC) = Dibutylchorendate % recovery

= Column to be used to flag recovery values with an asterisk

= Values outside of QC limits

DL = Diluted out

QUALITY CONTROL RESULTS SUMMARY ORGANOCHLORINE PESTICIDES AND PCB'S SW METHOD 8080/608

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590 Atlanta, Ga. 30329

Job No.: ATO77

Lab Sample Nos:

88020371-88020378

QC Report No: PCB-S-0002-88

Spike Duplicates: 88020371

Date Analyzed: 2-26-88

Spike:

Date Reported: 5-23-88

88020371

Laboratory Supervisor Approval:

Sample Matrix

Soil (ug/KG)

Dilution Factor: NA

**Moisture: N A

		Di	uplicat	e s	Spi	ke Re	covery	•	CLP	QC Limits
Compound	Blank	MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	N A	N A	N A	N A	NA	NA	NA	NA	22	40-120
q-BHC (Lindane)	N A	N A	N A	N A	N A	N A	NA	N A	15	56-123
Dieldrin	NA	N A	N A	NA	N A	N A	NA	N A	18	52-126
Endrin	N A	N A	N A	N A	N A	N A	N A	N A	21	56-121
Heptachlor	N A	N A	N A	N A	N A	NA	NA	N A	20	40-131
4.4'-DDT	N A	N A	N A	N A	N A	NA	N A	N A	27	40-131
PCB-1260	N A	39.3	29.3	29	33.3	ND	39.3	118	•	_

- Asterisked values are outside the CLP QC limits.
- ** If % moisture is reported, results are presented on a dry-weight basis.

=

F-69

ND = Not Detected. NA = Not Applicable.

Relative Percent Difference (RPD)

MS - MSD X 100 (MS + MSD)/2

MS = Spike Sample MSD = Spike Duplicate

Percent Recovery (PR) = SSR - SR x 100

SSR = Spiked Sample Result

SR = Sample Result

SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS SUMMARY ORGANOCHLORINE PESTICIDES AND PCB'S SW METHOD 8080/608

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

Job No.: AT077

Lab Sample Nos:

88020289-88020296

QC Report No: PCB-S-0003-88

Spike Duplicates: 88020292

Date Analyzed: 2-27-88

Spike:

88020292

Date Reported: 5-23-88 Laboratory Supervisor Approval:

Sample Matrix

Soil (ug/KG)

Dilution Factor:

**Moisture: NA

		Di	uplicat	es	Spil	ke Re	covery		CLP	QC Limits
Compound	Blank	MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	NA	N A	N A	NA	NA	NA	N A	N A	22	40-120
q-BHC (Lindane)	N A	N A	N A	N A	N A	N A	N A	N A	15	56-123
Dieldrin	N A	N A	N A	N A	N A	N A	N A	N A	18	52-126
Endrin	N A	N A	N A	N A	N A	N A	N A	N A	21	56-121
Heptachlor	N A	N A	N A	N A	N A	N A	N A	N A	20	40-131
4.4'-DDT	N A	N A	N A	N A	N A	N A	N A	N A	27	40-131
PCB-1260	ND	29.3	29.6	1	33.3	ND	29.3	88		_

Asterisked values are outside the CLP QC limits.

** If % moisture is reported, results are presented on a dry-weight basis.

ND = Not Detected. NA = Not Applicable.

MS - MSD X 100 MS = Spike Sample Relative Percent Difference (RPD) = (MS + MSD)/2MSD = Spike Duplicate

SSR = Spiked Sample Result

SR = Sample Result

SA = Spike Added (Concentration)

Percent Recovery (PR) = SSR - SR x 100 SA

QUALITY CONTROL RESULTS SUMMARY ORGANOCHLORINE PESTICIDES AND PCB'S SW METHOD 8080/608

Client:

ES Atlanta/Volk field AFB

Attn:

Dan Lane

Address:

57 Executive Park South

N. E. - Suite 590

Atlanta, Ga. 30329

Job No.: ATO77

Lab Sample Nos:

88020297-88020300

QC Report No: PCB-S-0004-88

Spike Duplicates: 88020297

Date Analyzed: 2-27-88

Date Reported: 5-23-88

Spike:

88020297

Laboratory Supervisor Approval:

Sample Matrix

Soil (ug/KG)

Dilution Factor: **Moisture: NA

		D	uplicat	es	Spi	ke Re	covery		CLP	QC Limits
Compound	Blank	MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	N A	N A	N A	N A	NA	NA	N A	N A	22	40-120
q-BHC (Lindane)	N A	N A	N A	N A	N A	N A	N A	N A	15	56-123
Dieldrin	NA	N A	N A	N.A	N A	N A	N A	N A	18	52-126
Endrin	NA	N A	N A	N A	N A	N A	N A	N A	21	56-121
Heptachlor	N A	N A	N A	N A	N A	N A	N A	N A	20	40-131
4.4'-DDT	N A	N A	N A	N A	N A	N A	N A	N A	27	40-131
PCB-1260	ND	31.1	30.4	2.1	33.3	ND	31.1	93		_

Asterisked values are outside the CLP QC limits.

ND = Not Detected. NA = Not Applicable.

Relative Percent Difference (RPD) =
$$\frac{MS - MSD}{(MS + MSD)/2}$$
 X 100 MS = Spike Sample MSD = Spike Duplicate

SSR = Spiked Sample Result

Percent Recovery (PR) = SSR - SR x 100 SR = Sample Result

SA = Spike Added (Concentration)

^{**} If % moisture is reported, results are presented on a dry-weight basis.

SOIL PESTICIDE SURROGATE RECOVERY

DL

72

104

124

78

98

150

98

136 *

88010214

88010215

1 88010216

1 88010218

1 88010219 88010220

1 88010216 MS

1 88010216 MSD 1 88010217

Job No.:

AT077

Client:

ES Atlanta

Jimmy Duncan

57 Executive Park South N. E. - Suite 590

Atlanta, Ga. 30329

Project:

88010192 1 88010193

1 88010194

1 88010196

1 88010197

1 88010198

| 88010186

Blank

Blank

Sample Number

Volk Field AFB

Date Analyzed: 2-29-88 Date Reported:

9-26-88

Laboratory Supervisor Approval:

NWB water

		
S1 (DBC	18# Sample Number	S1 (DBC)%#
102	88010204	1 90
1 74	88010205	i 88
210	* 88010206	l DL
152	88010206 MS	DL
88	1 88010206 MSD	‡ DL
96	88010207	1 70
96	88010208	l 78
1 118	l 88010209	1 72
DL	88010210	86
DL	88010211	104
DL	88010212) DL
DL	Blank	60

ADVISORY QC LIMITS (24-154)

S1 (DBC) = Dibutylchorendate \$ recovery

= Column to be used to flag recovery values with an asterisk

= = Values outside of QC limits

DL = Diluted out

88

92

90

76

64

68

68

84

102

SOIL PESTICIDE SURROGATE RECOVERY

Job No.:

AT077

Client:

ES Atlanta

Jimmy Duncan

57 Executive Park South N. E. - Suite 590

Atlanta, Ga. 30329

Date Reported:

Date Analyzed:

2-29-88 9-26-88

Laboratory Supervisor Approval:

Project:

Volk Field AFB

RuBinko

Sample Number	S1 (DBC) %#	Sample Number	S1 (DBC)%#
Blank	l 93	1 88020298	1 64
88020289	1 72	1 88020299	1 79
88020290	1 71	88020300	1 87
88020291	107	Blank	† 76
88020292	1 93	1 88020371	1 64
88020292 MS	ł 81	88020372	l 92
88020292 MSD	1 84	1 88020373	1 93
88020293	85	88020374	1 99
88020294	l 95	88020375	100
88020295	89	88020376	l 88
88020296	l 78	88020377	1 78
880202997	1 83	1 88020378	l 90
88020297 MS	1 72	88020371 MS	86
88020297 MSD	82	88020371 MSD	1 78
	ļ		

ADVISORY QC LIMITS (24-154)

S1 (DBC) = Dibutylchorendate % recovery

^{# =} Column to be used to flag recovery values with an asterisk

^{# =} Values outside of QC limits

Science	oratory
Υ,	ă
Ō	5
ng	-
-	
ы	>
0	ę
ě	Ä
ĕ	8
=	
	Ä
Eng	
5	•
Li	Ω

Environmental Quality Parameters QUALITY CONTROL RESULTS SUMMARY

> AT077 ES Job No.:

ES Atlanta/Volk Field AFB Dan Lane Client: Attn.:

57 Executive Park South, N.E., Suite 590

Address:

Atlanta, GA 30329

Page 1 of

SOL-W-0005-88 5/05/88 Date Reported: QC Report No.:

Laboratory Supervisor Approval:

Sample Matrix:

Water (mg/L)

Dilution Factor: NA QC Report for Sample Nos.:

88030536-0540

Notes		
	PR	
Spike Recovery	SSR	
Spike F	SR	
	SA	
te	RPD	
Duplicate	C2 RPD	
	<u>.</u>	
Blank		
Date Anal Blank	Anal Method	
	Anal	
Analytical Laboratory Sample Nos.	Spike	
Laboratory	Parameter Duplicates Spike	
Analytical	Parameter	

ž

ź

ž

ž

~

32.0

33.0

E160.1 <10

3/10/88

ź

88030536

TDS

F-74

NA = Not applicable NC = Not calculated

C1 = Concentration One C2 = Concentration Two x 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$ Relative Percent Difference (RPD)

SSR = Spiked Sample Result x 100 SSR - SR SA Percent Recovery (PR) =

SR = Sample Result
SA = Spike Added (Concentration)

Berkeley Laboratory Engineering-Science

QUALITY CONTROL RESULTS SUMMARY Environmental Quality Parameters

Page 1 of 1

AT077 ES Job No.: Client:

ES Atlanta/Volk Field AFB

Dan Lane Attn.:

57 Executive Park South, N.E., Suite 590 Address:

Atlanta, GA 30329

SOL-W-0006-88 Laboratory Supervisor Approval: 5/05/88 QC Report No.: Date Reported:

Sample Matrix:

Water (mg/L)

QC Report for Sample Nos.: 88030522, 88030527-0533 Dilution Factor:

ź

Notes	
PR	NA NA
ecovery SSR	Y.
Spike Recovery SR SSR	NA
SA	NA
te RPD	17
Duplicate C2	E160.1 <10 64.0 54.0
C1	64.0
Blank	¢10
Date Anal Anal Method	E160.1
. Date Anal	3/08/88
Sample Nos Spike	NA V
Analytical Laboratory Sample Nos. Parameter Duplicates Spike	88030522
Analytical Parameter	TDS

NA = Not applicable NC = Not calculated

C1 = Concentration One C2 = Concentration Two x 100 $\frac{c1 - c2}{(c1 + c2)/2}$ Relative Percent Difference (RPD)

SR = Sample Result
SA = Spike Added (Concentration) SSR = Spiked Sample Regult x 100 SSR - SR SA Percent Recovery (PR) =

181.2.4

Engineering-Science Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY Environmental Quality Parameters

Page 1 of 1

AT077 ES Job No.:

ES Atlanta/Volk Field AFB Client:

57 Executive Park South, Dan Lane Address:

Attn.:

Atlanta, GA 30329 N.E., Suite 590

Sample Matrix: Water (mg/L)

SOL-W-0007-88 5/05/88 OC Report No.: Date Reported:

Laboratory Supervisor Approval:

Dilution Factor: NA QC Report for Sample Nos.: 88030551-0557, 88030562

Spike Recovery SR S RPD Duplicate $^{\circ}$ 5 Blank Ana 1 Method Anal Date Laboratory Sample Nos. Spike Duplicates Analytical Parameter

Notes

ž

ž

ž

ž

50.0 48.0 E160.1 <10 3/10/88 ž 88030551

NA - Not applicable

TDS

F-76

NC - Not calculated

C2 - Concentration Two C1 - Concentration One **x** 100 $\frac{c1 - c2}{(c1 + c2)/2}$ ı Relative Percent Difference (RPD)

SSR = Spiked Sample Result x 100 SSR - SR Percent Recovery (PR) =

S

SA = Spike Added (Concentration) SR - Sample Result

Engineering-Science Berkeley Laboratory

Environmental Quality Parameters QUALITY CONTROL RESULTS SUMMARY

Page 1 of 1

AT077 ES Job No.:

ES Atlanta/Volk Field AFB Client:

Dan Lane Attn.:

57 Executive Park South, Address:

N.E., Suite 590

Atlanta, GA 30329

SOL-W-0008-88 Laboratory Supervisor Approval: 5/05/88 Date Reported: QC Report No.:

Sample Matrix:

Water (mg/L)

*QC Report for Sample Nos.: Dilution Factor: 88030565-0576

Notes	
PR	¥.
ecovery SSR	N.
Spike Recovery SR SSR	YN
SA	NA
e RPD	18
Duplicate C2	109
C1	131
Blank	24
Date Anal Anal Method	E160.1 24
	3/15/88
Sample Nos. Spike	NA NA
Laboratory Duplicates	88030575
Analytical Parameter	TDS

F-77

NA = Not applicable NC = Not calculated

C1 - Concentration	C2 = Concentration
C1 - C2 x 100	(C1 + C2)/2
ce (RPD)	
Relative Percent Difference	
Percent	
Relative	

TWO

One

SSR * Spiked Sample Result x 100 SSR - SR Percent Recovery (PR) =

SA

SR = Sample Result
SA = Spike Added (Concentration)

^{*} All samples are blank corrected.

QUALITY CONTROL RESULTS SUMMARY Metals Berkeley Laboratory Engineering-Science

ES Atlanta/VOLK Field AFB AT077 ES Job No.: Client:

57 Executive Park - Suite 590 Jimmy Duncan Address: Attn.:

Atlanta, GA 30329

Laboratory Supervisor Approval:

ICP-W-0036-88

QC Report No.: Date Reported:

5-15-88

Sample Matrix:

Water (mg/L)

Dilution Factor:

ź

QC Report for Sample Nos.: 88030522, 88030527-0531, 88030533, 88030536, 88030539

Analytical	Analytical Laboratory Sample Nos	Sample Nos.	Date	Anal	Blank	۵	Duplicate			Spike Recovery	scovery	ž	Notes
Parameter	Duplicates	Spike	Anal	Method		5	C 5	RPD	SA	SR	SSR	PR	
Antimony	88030522	88030522	5-02-88	E200.7	E200.7 <0.060 <0.060 <0.060	<0.060	<0.060	¥	0.500	<0.060 0.489	0.489	96	
Beryllium	88030522	88030522	4-25-88	E200.7	E200.7 <0.005 <0.001 <0.001	<0.001	<0.001	N	0.050	<0.001 0.050	0.050	100	
Cadmium	88030522	88030522	4-25-88	E200.7	<0.010	<0.010 <0.010 <0.010	<0.010	Ž	0.050	<0.010 0.054	0.054	108	
Chromium	88030522	88030522	4-25-88	E200.7	<0.050	<0.050 0.010B 0.011B	0.011B	10	0.200	0.010B 0.222	0.222	106	
Copper	88030522	88030522	4-25-88	£200.7	<0.025	<0.025 0.014B 0.018B	0.018B	25	0.250	0.014B 0.268	0.268	102	
Nickel	88030522	88030522	4-25-88	E200.7		<0.040 <0.010 <0.010	<0.010	NC	0.400	<0.010 0.402	0.402	101	
Silver	88030522	88030522	5-03-88	E200.7		<0.050 <0.010	<0.010	N	0.050	<0.010 0.036	0.036	72N	~
Thallium	88030522	88030522	4-25-88	E200.7		<0.100 0.104	<0.100	NC	2.50	0.104	0.104 2.73	105	
Vanadium	88030522	88030522	4-25-88	E200.7		<0.100 <0.100 <0.100	<0.100	N	0.500	<0.100 0.539	0.539	108	
Zinc	88030522	88030522	5-02-88	E200.7		<0.020 0.020	0.016	N N	0.200	0.020	0.237	109	
NC - Not calculated	lculated		N Sec	N = See attached legend	d legend		A * See Case Narrative	N 98	rrativ				
NA - Not applicable	plicable		B = Sec	B = See attached legend	d legend)			

Relative Percent Difference (RPD)

SSR - Spiked Sample Result

C1 = Concentration One C2 = Concentration Two

x 100

 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$

x 100 SSR - SR Percent Recovery (PR) =

SR = Sample Result SA = Spike Added (Concentration)

181.24.2

CASE NARRATIVE

Quality Control Summary Report QC Report No.: ICP-W-0036-88

This group of samples was received at Berkeley Laboratory. It consisted of eight samples to be analyzed for metals.

Silver spike recovery for this sample does not fa'l within the normal recovery range; however, this is attributed to the low solubility of silver in this preparation matrix.

Where possible, sample results are provided as estimated values below the reporting limit, but above the detection limit, for the parameter of interest. While this is more informative, it affects the application of quality control limits.

The QC sample for the analyte(s) listed was spiked at a concentration at or below the reporting limit due to sample preparation being completed prior to establishment of this limit: Ag.

LEGEND FOR RESULT QUALIFIERS

- Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- * Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

Berkeley Laboratory Engineering-Science

QUALITY CONTROL RESULTS SUMMARY Metals

> AT077 ES Job No.: Client:

ES Atlanta/Volk Field AFB Attn.:

57 Executive Park - Suite 590 Jimy Duncan Address:

Atlanta, GA 30329

ICP-W-0037-88 Laboratory Supervisor Approval: 5-13-88 Date Reported: QC Report No.:

Sample Matrix:

Water (mg/L)

Dilution Factor:

ž

QC Report for Sample Nos.: 88030551-0553, 88030556-0557, 88030562, 88030574

DAINTICEL L	abora tory	Analytical Laboratory Sample Nos.	Date	Anal	Blank	ā	Duplicate		•	Spike Recovery	covery	Z	Notes
Parameter D	Duplicates	Spike	Anal	Method		C1	C 5	RPD	SA	SR	SSR	PR	
Antimony	88030574	88030574 88030574	5-02-88	£200.7	<0.060	E200.7 <0.060 <0.060 <0.060	<0.060	ž	0.500	<0.060 0.496	0.496	66	
Beryllium	88030574	88030574	4-25-88	£200.7	<0.00>	E200.7 <0.005 <0.001 <0.001	<0.001	S N	0.050	<0.001 0.047	0.047	94	
Cadmium	88030574	88030574	4-25-88	E200.7	<0.010	<0.010 <0.010 <0.010	<0.010	2	0.050	<0.010 0.049	0.049	96	
Chromitum	88030574	88030574	4-25-88	E200.7	<0.050	<0.010	<0.010	Š	0.200	<0.010 0.187	0.187	93	
Copper	88030574	88030574	4-25-88	£200.7	<0.025	<0.025 <0.010 <0.010	<0.010	¥	0.250	<0.010 0.250	0.250	100	
Nickel	88030574	88030574	4-25-88	E200.7	<0.040	<0.010	<0.010	N	0.400	<0.010 0.360	0.360	90	
Silver	88030574	88030574	5-05-88	E200.7	<0.050		<0.010 <0.010	2	0.050	<0.010 0.030	0.030	N09	<
Thellium	88030574	88030574	4-25-88	E200.7		<0.100 <0.100 <0.100	<0.100	오	2.50	<0.100 2.53	2.53	101	
Venedium	88030574	88030574	4-25-88	E200.7	<0.100	c0.100	<0.100	¥	0.500	<0.100 0.481	0.481	96	
21nc	88030574	88030574	5-02-88	E200.7	<0.020	<0.010	<0.010	N N	0.200	<0.010	0.212	106	

F-81

B = See attached legend NA - Not applicable

x 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$ Relative Percent Difference (RPD)

C1 = Concentration One C2 = Concentration Two

SSR = Spiked Sample Result x 100 Percent Recovery (PR) - SSR - SR

SR - Sample Result SA - Spike Added (Concentration)

CASE NARRATIVE

Quality Control Summary Report
QC Report No: ICP-W-0037-88

This group of samples was received at Berkeley Laboratory. It consisted of seven samples to be analyzed for metals.

Silver spike recovery for this sample does not fall within the normal recovery range; however, this is attributed to the low solubility of silver in this preparation matrix.

Where possible, sample results are provided as estimated values below the reporting limit, but above the detection limit, for the parameter of interest. While this is more informative, it affects the application of quality control limits.

The QC sample for the analyte(s) listed was spiked at a concentration at or below the reporting limit due to sample preparation being completed prior to establishment of this limit: Ag.

181.23.1

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spike-1 sample recovery not within control limits.
- 3 Reported value was determined by the Method of Standard Additions.
- Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

Berkeley Laboratory Engineering-Science

QUALITY CONTROL RESULTS SUMMARY Metals

> AT077 ES Job No.: Client:

ES Atlanta/Volk Field AFB

Dan Lane Attn:

57 Executive Park South, Address:

N.E., Suite 590

Atlanta, GA 30329

Sample Matrix: Water (mg/L)

AAF-W-0014-88 Laboratory Supervisor Approval: 5/16/88 Date Reported: QC Report No.:

ž Dilution Factor: QC Report for Sample Nos.: 88030522, 88030527-0531, 88030551-0553

	Laboratory	Laboratory Sample Nos. Date Anal	Date	Anal	Blank	á	Duplicate		Spik	Spike Recovery	2		Notes
Metal	Duplicates	Duplicates Spike	Anal Method	4e thod		5	C2 RPD	RPD	SA SR	SR SSR	SR	PR	
Arsenic	88030409	88030409 88030409 4/2	4/29/88	29/88 206.2	<0.005 <0.005W <0.005W NC 0.020 <0.005W 0.035 175	<0.005W	<0.005	N NC	0.020	CO.005W	0.035	175	

190 135

0.019

<0.005 <0.005 NC 0.010 <0.005 0.019
<0.005W <0.005W NC 0.020 <0.005W 0.027</pre>

<0.00> <0.00>

E239.2 270.2

5/05/88 4/27/88

88030409 88030409

88030409 88030409

Selenium

Lead

NA - Not applicable

W - See attached legend NC - Not calculated

C2 - Concentration Two C1 = Concentration One x 100 $\frac{(c_1 + c_2)/2}{}$ C1 - C2 Relative Percent Difference (RPD)

SSR - Spiked Sample Result x 100 SSR - SR 8 Percent Recovery (PR) =

SR = Sample Regult SA = Spike Added (Concentration)

181.25.2

LEGEND FOR RESULT QUALIFIERS

- Reported value is less than Reporting limit but greater than the MDL.
- N Spike-1 sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- * Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (35-115%), while sample absorbance is less than 50% of spike absorbance.

AT077 ES Job No.:

ES Atlanta/Volk field AFB

Dan Lane Client: Attn:

57 Executive Park South N. E. - Suite 590

Address:

30329 Atlanta, Ga.

AAF-S-0004-88 Laboratory Supervisor Approval: 5-19-88 QC Report No.: Date Reported:

> Sample Matrix: Soil (mg/KG)

88010207-88010212, 88010214-88010216

QC Report for Sample Nos.:

១ **Blank** Me thod Anal Dete Anal

Sample Nos. Spike

Laboratory Duplicates

Analyte

He tal

Notes

Spike Recovery

\$ \$

Dilution Factor:

*Moisture:

SA

RPD

స

Duplicate

88010207 8 2

F-86

<0.500 SM3050

5-11-88

88010207

1.80

5.00 1.80 5.80 0 1.80

8

NA = Not applicable NC = Not calculated Relative Percent Difference (RPD) =

x 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$

x 100

SSR - SR SA

Percent Recovery (PR) =

C1 = Concentration One C2 = Concentration Two

SSR = Spiked Sample Result
SR = Sample Result
SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS METALS

ES Job No.: ATO77
Client: ES Atlanta/Volk field AFB
Attn: Dan Lane
Address: 57 Executive Park South

57 Executive Park South N. E. - Suite 590 Atlanta, Ga. 30329

QC Report No.: AAF-S-0005-88
Date Reported: 5-18-88
Laboratory Supervisor Approval:

\$ \$

Dilution Factor:

*Moisture:

Sample Matrix: Soil (mg/KG) QC Report for Sample Nos.:

88020294-88020300, 88020371-88020372

8 Spike Recovery SSR S SA RPD Duplicate స ဌ **Blank** Anal Method Date Anal Sample Nos. Spike Laboratory Duplicates Analyte Heta]

Notes

78

NC 5.000.600 4.8 0.700 0.600 <0.500 SW3050 5-11-88 88020294 88020294

= See case narrative attached A = Not applicable

NC = Not calculated

Relative Percent Difference (RPD) = $\frac{C1 - C2}{(C1 + C2)/2}$ x 100

C1 = Concentration One C2 = Concentration Two

SSR = Spiked Sample Result x 100 SSR - SR SA Percent Recovery (PR) =

SA = Sample Result SA = Spike Added (Concentration)

88-A1-VOLK0058 1

QC-FRM04

Lead

CASE NARRATIVE

QUALITY CONTROL RESULTS SUMMARY

Samples No.: 88020294-88020300, 88020371-88020372

QC Report Number: AAF-S-0005-88

The Relative Percent Difference is not calculated since the sample values are less than five times the detection limit. Acceptable RPD in this case is defined a duplicate values within one detection limit of each other.

88-A1-VOLK0059 1

CN-FRM01

QUALITY CONTROL RESULTS METALS

ES Atlanta/Volk field AFB 57 Executive Park South Dan Lane AT077 ES Job No.: Address: Client: Attn:

Atalanta, Ga. 30329 N. E. - Suite 590

Laboratory Supervisor Approval:

AAF-S-0006-88

QC Report No.: Date Reported:

5-18-88

Sample Matrix: Soll (mg/KG)

¥ ¥ Dilution Factor: *Moisture:

> 88020373-88020378 QC Report for Sample Nos.:

8 Spike Recovery SA RPD Duplicate \overline{z} Bl ank Method Anal Date Anal Sample Nos. Spike Laboratory Duplicates Analyte **M**etal

Notes

92

SW3050 <0.500 <0.500 <0.500 NC 5.00<0.500 4.60

5-11-88 88020373 88020373 Lead

C1 = Concentration One

C2 = Concentration Two

SSR - SR SA Percent Recovery (PR) =

Relative Percent Difference (RPD) =

NA = Not applicable NC = Not calculated $\frac{c_1 - c_2}{(c_1 + c_2)/2} \times 100$

x 100

SSR = Spiked Sample Result

SR = Sample Result
SA = Spike Added (Concentration)

88-A1-VOLK0061 1

QC-FRM04

F-89

QUALITY CONTROL RESULTS METALS

AT077 ES Job No.: Client:

ES Atlanta/Volk field AFB

57 Executive Park South Dan Lane Address:

Attn:

Atlanta, Ga. 30329 N. E. - Suite 590

AAF-S-0007-88 QC Report No.: Date Reported:

Laboratory Supervisor Approval: 5-17-88

Sample Matrix:

Soil (mg/KG)

¥× 9 Dilution Factor: **Moisture:

> 88010189, 88010195-88010199, 88010204-88010206 QC Report for Sample Nos:

Analyte	Laboratory	Sample Nos.	Date	Anal	Blank		Duplicate	ą.	Spik	Spike Recovery	overy		Notes
	Dupl icates	Spike	Anal	Method		5	C2 RPD	RPD	SA SR	SR	SSR	E.	
	88010189	68010189	5-11-88	SW3050	SW3050 <0.500 74.0	74.0	113	* -	113 41 50.0 74.0 75.0	0.	75.0	2	•

If \$ moisture is reported, results are presented on a dry-weight basis.

See attached legend

F-90

See Case Narrative attached

Relative Percent Difference (RPD) =
$$\frac{C_1-C_2}{(C_1+C_2)/2}$$
 X 100 C1 = Concentration One C2 = Concentration Two

x 100 SSR - SR Percent Recovery (PR) =

SR = Sample Result SA = Spike Added (Concentration) SSR = Spiked Sample Result

CASE NARRATIVE
QUALITY CONTROL RESULTS SUMMARY
Samples No.: 88010189, 88010195-88010199,
88010204-88010206
Work Order Number AAF-S-0007-88

The value reported for the sample 88010189 is different than shown on the QC Results Summary.

The reported value for the sample used for QC was achieved by the Method of Standard Additions (MSA). This requirement for MSA was a result of spike recoveries outside acceptable limits for the predigestion sample spike and post digestion analytical spike on the sample.

CN-FRMO1

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- * Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

QUALITY CONTROL RESULTS METALS

ES Job No.: AT077 Client: ES Atlanta/Volk field AFB Attn: Dan Lane

57 Executive Park South

Address:

N. E. - Suite 590 Atlanta, Ga. 30329

Date Reported: 5-17-88
Laboratory Supervisor Approval:

AAF-S-0008-88

QC Report No.:

Dilution Factor: 10

K/K

Sample Matrix: Soil (mg/KG) QC Report for Sample Nos: 88010217-88010220, 88020289-88020293

Spike Recovery Notes	13.0 51* 40 22.0 79.0 142 A
a	514 4
Duplicate C2 RPD	13.0
15	22.0
Blank	<0.500
Anal Method	SW3050
Date Anal	5-11-88
Sample Nos. Spike	88010217
Laboratory Dupl icates	88010217
Analyte Metal	Lead

** If % moisture is reported, results are presented on a dry-weight basis.

See legend attached

See Case Narrative attached

C1 = Concentration One C2 = Concentration Two X 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$ Relative Percent Difference (RPD)

SA = Spike Added (Concentration) SSR = Spiked Sample Result SR = Sample Result x 100 SSR - SR SA Percent Recovery (PR) =

88-A1-VOLK0048 1

QC-FRMO4

LEGEND FOR RESULT QUALIFIERS

- Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- * Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbunce is less than 50% of spike absorbance.

CASE NARRATIVE QUALITY CONTROL RESULTS SUMMARY Samples No.: 88010217-88010220, 88020289-88020293 Work Order Number AAF-S-0008-88

The value reported for the sample 88010217 is different than shown on the QC Results Summary.

The reported value for the sample used for QC was achieved by the Method of Standard Additions (MSA). This requirement for MSA was a result of spike recoveries outside acceptable limits for the predigestion sample spike and post digestion analytical spike on the sample.

CN-FRM01

Engineering-Science Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY

Metals

AT077 ES Job No.: Client:

ES Atlanta/Volk Field AFB

Dan Lane Attn:

57 Executive Park South, Address:

N.E., Suite 590

Atlanta, GA 30329

Sample Matrix: Water (mg/L)

Laborațory Supervisor Approval:

CVM-W-0004-88

5/16/88

Date Reported: QC Report No.:

Dilution Factor:

88030533, 88~30536, 88030539, QC Report for Sample Nos.: 88030522, 88030527-0531,

88030574

Notes 100 PR <0.0002 <0.0002 <0.0002 NC 0.002 <0.0002 0.002 SSR Spike Recovery S RPD Duplicate **C**5 5 Blank 3/28/88 E245.1 Method Ana 1 Anal Date Laboratory Sample Nos. 88030529 88030529 Spike Duplicates Mercury

NA - Not applicable

NC - Not calculated

x 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$ Relative Percent Difference (RPD)

C2 - Concentration Two C1 - Concentration One

SSR - Spiked Sample Result x 100 SSR - SR YS Percent Recovery (PR) =

SR - Sample Result

SA - Spike Added (Concentration)

Metal

Engineering-Science Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY

Metals

ES Job No.: AT077 Client: ES Atlant

: ES Atlanta/Volk Field AFB

Attn: Dan Lane

Address: 57 Executive Park South,

N.E., Suite 590

Atlanta, GA 30329

Sample Matrix: Water (mg/L)

Date Reported: 5/16/88
Laboratory Supervisor Approval:

CVM-W-0005-88

QC Report No.:

Dilution Factor: NA

QC Report for Sample Nos.: 88030551-0553, 88030556-0557, 88030562 Notes

<0.0002 <0.0002 <0.0002 NC 0.002 <0.0002 0.00194 97 PR Spike Recovery SA RPD Duplicate **C**5 ٦ Blank E245.1 Method 4/02/88 Anal Date Laboratory Sample Nos. 88030562 Spike 88030562 Duplicates Mercury He tal

NA - Not applicable NC - Not calculated

x 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$ Relative Percent Difference (RPD)

C1 = Concentration One C2 = Concentration Two

SSR - Spiked Sample Result x 100 SSR - SR ð Percent Recovery (PR) =

SR = Sample Result SA = Spike Added (Concentration)

181.25.3

QUALITY CONTROL RESULTS ENVIRONMENTAL QUALITY PARAMETERS

ES Job No.: AT077 Client: ES Atlanta/Volk field AFB Attn: Dan Lane

Dan Lane 57 Executive Park South

Address:

N. E. - Suite 590 Atlanta, Ga. 30329

QC Report No.: SOL-S-0002-88
Date Reported: 5-17-88
Laboratory Supervisor Approval:

Sample Matrix: Soil \$ QC Report for Sample Nos: 88020289-88020300

ž

Z

Z

ž

웆

0:

1:0

¥

D2216

4-27-88

ĭ

88020300

Hoisture

A = See Case Narrative attached
NA = Not applicable

NC = Not calculated

C1 = Concentration One C2 = Concentration Two $\frac{c_1 - c_2}{(c_1 + c_2)/2} \times 100$ Relative Percent Difference (RPD) =

SSR = Spiked Sample Result x 100 SSR - SR SA Percent Recovery (PR) =

SA Sample Result
SA = Spike Added (Concentration)

CASE NARRATIVE
QUALITY CONTROL RESULTS SUMMARY
Samples No.: 88020289-88020300
Work Order Number SOL-S-0002-88

The Relative Percent Difference is not calculated since the sample values are less than five times the detection limit. Acceptable RPD in this case is defined a duplicate values within one detection limit of each other.

88-A1-VOLK0044 1

CN-FRM01

ENVIRONMENTAL QUALITY PARAMETERS QUALITY CONTROL RESULTS

ES Atlanta/Volk field AFB Dan Lane AT077 ES Job No.: Cl lent: Attn:

57 Executive Park South N. E. - Suite 590

Address:

Atlanta, Ga.

30329

SOL-S-0003-88 Laboratory Supervisor Approval: 5-17-88 QC Report No.: Date Reported:

Sample Matrix: Soil \$

QC Report for Sample Nos: 88010204-88010212

Notes	
PR	N
Spike Recovery SA SR SSR	NA
ke Re SR	N V
Sp1	42
licate C2 RPD	#
Duplicate C2 RI	5.0
C1	5.2
Blank	¥
Anal Method	D2216
Date Anal	4-27-88
Sample Nos. Spike	M
Laboratory Duplicates	88010212
Analyte	Moisture

NA = Not applicable NC = Not calculated

C1 = Concentration One C2 = Concentration Two $\frac{c_1 - c_2}{(c_1 + c_2)/2} \times 100$ Relative Percent Difference (RPD) =

SSR = Spiked Sample Result
SR = Sample Result
SA = Spike Added (Concentration) x 100 SSR - SR SA Percent Recovery (PR) =

F-100

ENVIRONMENTAL QUALITY PARAMETERS QUALITY CONTROL RESULTS

ES Atlanta/Volk field AFB 57 Executive Park South N. E. - Suite 590 Dan Lane AT077 ES Job No.: Address: Client: Attn:

SOL-S-0004-88 Laboratory Supervisor Approval: 5-17-88 QC Report No.: Date Reported:

Sample Matrix:

Atlanta, Ga. 30329

\$011 \$

QC Report for Sample Nos: 88010186-88010199

Analyte Hetal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	5	Duplicate C2 RPD	RPD	Sp1	ke Re SR	Spike Recovery SA SR SSR	E	Notes
Moisture	88010199	N N	4-26-88	D2216	N	2.1	2.1	NC NA	¥	¥ X	NA NA	¥	<

= See Case Narrative attached NA = Not applicable

NC = Not calculated

 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$ Relative Percent Difference (RPD) =

X 100

C1 = Concentration One C2 = Concentration Two

SSR - SR SA Percent Recovery (PR) =

x 100

SSR = Spiked Sample Result
SR = Sample Result
SA = Spike Added (Concentration)

88-A1-VOLK0045 1

QC-FRM05

CASE NARRATIVE
QUALITY CONTROL RESULTS SUMMARY
Samples No.: 88010186-88010199
Work Order Number SOL-S-0004-88

The Relative Percent Difference is not calculated since the sample values are less than five times the detection limit. Acceptable RPD in this case is defined a duplicate values within one detection limit of each other.

88-A1-VOLK0046 1

CN-FRMO1

ENVIRONMENTAL QUALITY PARAMETERS QUALITY CONTROL RESULTS

At 077 ES Job No.: Client:

ES Atlanta/Volk field AFB

57Executive Park South Dan Lane Address: Attn:

Atlanta, Ga. 30329 N E. - Suite 590

QC Report No.: Date Reported:

SOL-S-0005-88 Laboratory Supervisor Approval: 5-17-88

Sample Matrix: Soil \$

QC Report for Sample Nos: 88010214-88010220

F-103

= See Case Narrative attached

NA = Not applicable NC = Not calculated

C1 = Concentration One C2 = Concentration Two X 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$ Relative Percent Difference (RPD) =

SSR = Spiked Sample Result
SR = Sample Result
SA = Spike Added (Concentration) x 100 SSR - SR SA Percent Recovery (PR) =

CASE NARRATIVE
QUALITY CONTROL RESULTS SUMMARY
Samples No.: 88010214-88010220
Work Order Number SOL-S-0005-88

The Relative Percent Difference is not calculated since the sample values are less than five times the detection limit. Acceptable RPD in this case is defined a duplicate values within one detection limit of each other.

88-A1-VOLK0042 1

CN-FRM01

ENVIRONMENTAL QUALITY PARAMETERS QUALITY CONTROL RESULTS

ES Atlanta/Volk field AFB Dan Lane AT077 ES Job No.: Client: Attn:

57 Executive Park South N. E. - Suite 590

Address:

30329 Atlanta, Ga.

SOL-S-0006-88 Laboratory Supervisor Approval: 5-17-88 QC Report No.: Date Reported:

Sample Matrix: Soil \$

88020371-88020378 QC Report for Sample Nos:

Notes PR	N A
_	¥
Spike Recovery SA SR SSR	Ş
Sp1	¥
licate C2 RPD	NC NA
Duplicate C2 R	±
5	3.4
B1 ank	NA A
Anal Method	D2216
Date Anal	4-26-88
Sample Nos. Spike	NA
Laboratory Dupl icates	88020378
i Analyte Metal	Moisture

= See Case Narrative attached.

NA = Not applicable NC = Not calculated

C1 = Concentration One C2 = Concentration Two X 100 $\frac{c_1 - c_2}{(c_1 + c_2)/2}$ Relative Percent Difference (RPD) =

SSR = Spiked Sample Result
SR = Sample Result
SA = Spike Added (Concentration) x 100 SSR - SR Percent Recovery (PR) =

88-A1-VOLK0039 1

QC-FRM05

CASE NARRATIVE
QUALITY CONTROL RESULTS SUMMARY
Samples No.: 88020371-88020378
Work Order Number SOL-S-0006-88

The Relative Percent Difference is not calculated since the sample values are less than five times the detection limit. Acceptable RPD in this case is defined a duplicate values within one detection limit of each other.